Early Years Education in Qatar: a comparative study of its nature, provision and quality in national and international pre-school settings

Al-Thani,, Tamader Jassim

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By

TAMADER JASSIM AL-THANI

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ABSTRACT

Early Years Education in Qatar: a comparative Study of its nature, provision and quality in national and international pre-school settings

By

TAMADER JASSIM AL-THANI

This study investigated and compared the quality and nature of Arabic and English speaking preschools' curricula in the State of Qatar. To the researcher's knowledge, this is the first study to investigate, compare and assess the preschool curricula currently provided in the State of Qatar.

Four major research tools were used including structured teacher's questionnaire, structured teachers' interviews, structured classroom observations and structured mother's questionnaire. The teachers' questionnaire sample consisted of 107 teachers, 81 Arabic school teachers and 26 English school teachers. The classroom observations sample consisted of 17 preschools, 9 Arabic speaking schools and 8 English speaking schools. Teachers' interviews sample consisted of 18 Arabic speaking preschool teachers and 16 English speaking preschool teachers. The mother's questionnaire sample consisted of 50 mothers randomly selected from 17 Arabic speaking schools.

Study findings included the following: (1) the English preschools had many advantages over the Arabic preschools in terms of all the seven domains of the teacher's questionnaire.(2) the Arabic speaking preschools are of lower quality in terms of all domains of the teacher's interview. These include: teachers' qualifications, experience, duties, wages, teacher–child ratio, type of curriculum, teaching approaches,

appropriateness of the curriculum. (3) In terms of classroom observations, the overall mean ECERS score for the English speaking preschool sample was 6.00 compared to 4.8 for the Arabic speaking classrooms sample. (4) Qatari mothers of Arabic preschools children preferred the developmental goals rather than traditional goals to be part of their young children's education but within the Islamic religious and moral values.

The findings lead to the conclusion that the Arabic speaking preschool curriculum in Qatar suffered from obvious drawbacks in all the domains studied which required serious consideration from the Ministry of Education and other institutions and organisations interested in early childhood education.

DEDICATION

To my father may God bless his soul and to my mother may God give her long life I dedicate this dissertation. Without their help, support and encouragement I wouldn't have reached this level of education.

To my husband, Sheikh Abdulrahman bin Saud Al-Thani, and my children, I give my deepest expression of love and appreciation for the encouragement that you gave and the sacrifices you made during this graduate program

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DECLARATION

This thesis results entirely from my own work and has not been previously offered in candidate for any other degree or diploma in this or any other university.

Tamader Jassim Al-Thani

...Tamader.....

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LIST OF TABLES

LIST OF FIGURES

1- CHAPTER ONE

CONTEXT OF THE RESEARCH

The purpose of this study is to compare and assess the preschool curricula provided in the State of Qatar. The first chapter provides an overview and background of the study. It serves to justify why the researcher decided to undertake the research. The following three dimensions that have affected the preschool education in Qatar will be discussed briefly and subheadings will be used to reflect these perspectives.

- Introduction- the preschool goals
- Qatar- Its geography and population
- Historical and religious influences

The geographical, demographic, historical and cultural dimensions are considered crucial factors that affect the educational systems in every part of the world (Al-Hor, 1996) and , therefore, need to be briefly considered to locate preschool education in the Qatar context..

1.1 Introduction

All children can benefit from high-quality early education programs. Research over the last 20 years has provided convincing evidence that children who have attended high-quality preschool programs (Reynolds, 2000) —

- perform better in reading and math throughout the elementary grades;
- are less likely to be held back a grade;

- are less likely to require special education;
- are less likely to present discipline problems; and
- are more likely to be enthusiastic about school and have good school attendance.

Over the past thirty years, policymakers have increasingly become interested in Preschools education. Worldwide, preschool initiatives have grown significantly. Spurred by public outcry about a crisis in education, most countries are turning their attention to the early years, in the hope that children will be better prepared for school. Governments' investment in early care services necessitates the evaluation of the effectiveness. This is especially important in light of research findings that quality matters.(See Reynolds, 2000) This evaluation is one step in assessing and improving the quality and effectiveness of preschool education.

In Qatar preschools can be categorized into two types: Arabic speaking preschools and English speaking preschools. Both types are run by nongovernmental organizations. The curriculum adopted by the Arabic preschools is the governmentally designed Experiential Curriculum based on the theory of experiential learning that was put into practice in 1987. These schools have been supported financially and technically by the Ministry of Education for the last forty years. On the other hand, the majority of the English speaking preschools follow the National Curriculum for England - Foundation Stage.

The purpose of this study was to investigate, compare and assess the quality of preschool curricula currently provided in the State of Qatar. To the researcher's knowledge, this field has not been explored by any published studies before. This is possibly due to two major reasons. The

first is the lack of support and interest of the government in research in this field and the second is the lack of Qatari researchers and specialists in the field of early childhood education. This is primarily due to the newness of higher education in Qatar and the lack of educational research centres in the country.

The focus of the study was to answer the following questions:

1. To what extent does each curriculum achieve the child's math development, knowledge and understanding of the world, creative development, communication language and literacy, personal, social and emotional development, physical development, and appropriate environment?

2. How do these preschool systems differ regarding the teacher's qualifications, experience and duties, ratio of teachers to children, type of curriculum, and provision of stimulating environment?

3. What are the perceptions of the mothers of children in the Arabic preschools regarding the traditional and developmental curriculum goals, content, teaching strategies, and teachers' roles?

It is hoped that the data and information provided by this study will shed light on the limitations of preschool curricula and the aspects that need to be revised and modified to ensure that the curricula considers all aspects of the child's development.

For the purpose of this study, the researcher used a multi-method approach in collecting and analyzing data. Four research tools were used

including: structured teacher's questionnaire, structured teachers' interviews, structured classroom observations and structured mother's questionnaire.

A questionnaire is a printed form sent to a respondent who completes the form and returns it. It is usually designed specifically for the study in question and yields many separate pieces of information. Analysis usually consists of tabulation or cross-tabulation of responses to individual items (Whitney, 1972).

Questionnaires are most often used when direct (person-to-person) contact with respondents is not possible or necessary. It is probably the most widely-used data source in educational research. Some experts have estimated that as many as half the research studies conducted use a questionnaire as a part of the data collection process.

Questionnaires were used as tools in this research for the following advantages. First, they are easy to analyze, and most statistical analysis software can easily process them. Second, they are cost effective when compared to other research tools. This is especially true for studies involving large sample sizes and large geographic areas. Written questionnaires become even more cost effective as the number of research questions increases.

The second research tool used in this research was the structured interview. The structured interview is a data- collection instrument used to gather data, either by telephone or face to face. In a structured interview, the evaluator asks the same questions of numerous individuals in a precise manner, offering each individual the same set of possible responses. Interviews provide in-depth information about a particular

research issue or question. Whereas quantitative research methods gather a small amount of information from many subjects, interviews gather a broad range of information from a few subjects.

The advantages of this approach include richness or response, ability to clear up misconceptions, opportunity to follow up responses, and, by implication, better data in many situations. Additionally, respondents will usually be more conscientious if the interviewer is present.

Pawlas (1995) stated the following Strengths of the structured interview:

1. It enables the researcher to examine the level of Understanding a respondent has about a particular Topic - usually in slightly more depth than with a questionnaire.

2. All respondents are asked the same questions in the same way. This makes it easy to repeat ("replicate") the interview. In other words, this type of research method is easy to standardise.

3. There is a formal relationship between the researcher and the respondent with the latter knowing exactly what is required from them in the interview. If, for example, a respondent is unable or unwilling to answer a question the researcher (because they are present at the interview) is aware of the reasons for a failure to answer all questions.

4. The researcher does not have to worry about response rates, biased (self-selected) samples and incomplete questionnaires.

In any social research it is difficult to envisage circumstances in which interviews or self-completed questionnaires should be used in the field unless adequate information has been obtained on the circumstances surrounding the research subjects. To the researcher this is the stage of gaining 'site-specific' knowledge.

Obtaining this kind of knowledge was the prime purpose of the observation phase of this study. To gather hard information about the environment in addition to questionnaires and interviews, it was felt necessary to use an observation tool. This would provide the researcher with a valuable opportunity to learn more about the practices and context of the work. The choice of 'structured observation' as a specific form of observation could result not only in increased site-specific knowledge, but also in hard data on various aspects of work. (Douglas,1976)

The observation tool used in this study was the Early Childhood Education Rating Scale-Revised - ECER-R. Reliability and validity of this tool has been recognized and reinforced internationally by the number of studies that support using them as tools for assessing levels of quality in child care. (Harms, T., 1999)

The study consists of nine chapters. Chapter one deals with the context of the research focusing on the geography and history of Qatar. Chapter two focuses on the background and rationale of the study. Chapter three summarises the most famous learning theories and preschool curriculum models and some links to research on preschool education. Chapter four explain the methodology used by the researcher. It includes the hypotheses, research tools, population and sample, and

validity and reliability of research tools. Chapter five presents the results of the teachers' questionnaire. Chapter six deals with site visits and teachers' interviews. Chapter seven deals with mothers' perceptions of the preschool curriculum. Chapter eight is a summary and discussion. Chapter nine includes the conclusion of the study

1.2 Qatar- Geography and Population

Qatar (pronounced KA-tar) occupies 11,437 square kilometres on a peninsula that extends approximately 160 kilometres north into the Persian Gulf from the Arabian Peninsula (see appendix 1). Varying in width between fifty-five and ninety kilometres, the land is mainly flat (the highest point is 103 meters) and rocky. Notable features include coastal salt plains, elevated limestone formations (the Dukhan anticline) along the West Coast under which lies the Dukhan oil field, and massive sand dunes surrounding Khawr al Udayd, an inlet of the Gulf in the Southeast known to local English speakers as the Inland Sea. Of the islands belonging to Qatar, Halul is the most important. Lying about ninety kilometres east of Doha, it serves as a storage area and loading terminal for oil from the surrounding offshore fields.

The capital, Doha, is located on the central east coast on a sweeping (if shallow) harbour. Other ports include Umm Said, Al Khawr, and Al Wakrah. Only Doha and Umm Said are capable of handling commercial shipping, although a large port and a terminal for loading natural gas are planned at Ras Laffan, north of Al Khawr. Coral reefs and shallow coastal waters make navigation difficult in areas where channels have not been dredged. Qatar shares its land border with the United Arab Emirates (UAE), with which in 1993 it continued to have a dispute in the Khawr al Udayd area. The boundary with Saudi Arabia was settled in

1965 but never demarcated. Qatar's northwest coast is fewer than thirty kilometres from Bahrain.

Doha is the major administrative, commercial, and population centre. In 1993 it was linked to other towns and development sites by a system of about 1,000 kilometres of paved roads. Doha's international airport has an approximately 4,500-meter main runway, capable of receiving all kinds of aircraft.

The long summer (June through September) is characterized by intense heat and alternating dryness and humidity, with temperatures exceeding 55° C. Temperatures are moderate from November through May, although winter temperatures may fall to 17°C, which is relatively cool for the latitude. Rainfall is negligible, averaging 100 millimetres per year, confined to the winter months, and falling in brief, sometimes heavy storms that often flood the small ravines and the usually dry wadis. Sudden, violent dust storms occasionally descend on the peninsula, blotting out the sun, causing wind damage, and momentarily disrupting transport and other services.

The scarcity of rainfall and the limited underground water, most of which has such a high mineral content that it is unsuitable for drinking or irrigation, restricted the population and the extent of agricultural and industrial development the country could support until desalination projects began. Although water continues to be provided from underground sources, most is obtained by desalination of seawater. (Ruwaini, 1989).

The population of Qatar before independence must be estimated because, until oil revenues created a reason to stay on the peninsula,

individuals and whole tribes migrated when the economic or security situation became intolerable. Some sought work elsewhere; others joined neighboring branches of their tribe. In 1908 a British observer estimated there were 27,000 inhabitants; 6,000 were described as foreign slaves and 425 as Iranian boat builders. (By 1930 the number of Iranians had increased to 5,000, or almost 20 percent of the population) The population probably remained fairly stable until the 1930s and 1940s, when economic hardship and regional insecurity caused people to migrate to other areas, leaving Qatar with a population of only 16,000 in 1949, according to one estimate.

After oil exports increased in the 1950s, employment opportunities attracted Arabs from other Persian Gulf countries and foreign workers (mostly Indians, at first) to Qatar. In 1970 the Qatari government, assisted by British experts, carried out a census that reported a population of 111,113, of whom 45,039, or more than 40 percent, were identified as Qataris. With the oil boom of the 1970s and the resultant influx of foreign workers came the largest population growth, so that by 1977 it was estimated that 200,000 people lived in the country, about 65 percent of who were non-Qataris. During the 1960-75 period, the population grew at an average annual rate of 8.9 percent; in the 1970-75 period it grew at 12.7 percent.

The census of March 16, 1986, counted a population of 369,079, and an estimate for 1990 brought the total to 371,863, including up to 70,000 Qataris. The July 1992 estimate was 484,387, with a 1992 growth rate of 3.2 percent. The 1989 birth rate was 31.8 per 1,000 population and the death rate 2.5 per 1,000, for a natural increase per 1,000 of 29.3, a high rate for a developing country. The 1986 census showed that 84

percent of the population was concentrated in Doha and in the neighboring town of Al Rayyan. Other towns included Al Wakrah (population 13,259) and Umm Said (population 6,094). In total, 88 percent of the population was urban. Reflecting the high number of migrant workers, about 67 percent of the population was male. The age breakdown was as follows: under fifteen, 27.8 percent; fifteen to twenty-nine, 29.3 percent; thirty to forty-four, 32.3 percent; forty-five to fifty-nine, 8.6 percent; and sixty and over, 2.0 percent.

South Asians (mainly Indians, Pakistanis, Bangladeshis, and Filipinos) made up about 35 percent of the population; Qataris, 20 percent; Arabs, 25 percent; Iranians, 16 percent; and others, 4 percent. Roughly 90 percent of the population was Muslim (mostly Sunni), and the remainder were Christian, Hindu, Bahai, and others. (Ministry of information, 1989)

1.3 Qatar – Historical and Religious Influences

1.3.1 Qatar in Ancient Times:

The first signs of human habitation in the Qatar peninsula date from 4000BC. Archaeological expeditions from Denmark (1965), Britain (1973) and France (1976) found rock carvings and groups of pottery that indicate human presence at that time (Ruwaini, 1989). Qatar also appears on ancient maps, a clear sign that travellers and explorers knew of the presence of civilized settlements there. Some historical texts claim that the first inhabitants of Qatar are the ancient Canaanites, a people known for their trade and navigation skills.

Qatar's strategic location on the Arabian Gulf was the main reason for the seasonal migration of Arab tribes from the Arabian

Peninsula and particularly from the Nejd desert. When the ancient Mediterranean flourished with many civilizations, the Arabian Gulf area, with its strategic location, found commercial prosperity. Many fishing centres like Al Bida, Al Khor, Al Wakra and Al Zubara appeared which encouraged pearl trading. The Gulf suffered from a commercial decline during the Roman era as trade concentrated in the Red Sea area. However, from the third century AD the Gulf area regained its important trading position (Middle East Economic Digest, 1983)

1.3.2 Influence of Islam:

With the appearance of Islam in the Arabian Peninsula, Qatar converted in the mid seventh century AD and had a role in the spread of Islam beyond the seas. According to historical documents, Qatar became renowned for the skill of its people in weaving and cloth making as well as for the quality of its horses and camels. Some historians considered it part of the region then known as Bahrain, which covered the area from Basra in Iraq to Oman. Qatar thrived in the Abbasid period and had excellent relations with the Caliphs in Baghdad. Abbasid artefacts were discovered in Moab fort in western Qatar. The fort itself is a good example of Abbasid architecture (Dabbagh, 1991).

1.3.3 The Ottoman Period:

At the beginning of the sixteenth century, Qatar fell under the influence of the Portuguese, who succeeded in establishing their control over many areas in the Arabian Gulf and controlled trade and navigation.

Their small forts can still be seen today. However, "in 1538 AD, the Ottomans managed to expel the Portuguese and for four centuries Qatar, like other areas in the Gulf, was under Ottoman influence. Ottoman sovereignty was mostly a formality and real power stayed in the hands of local Sheikhs" (ibid, 55).

1.3.4 Independence:

Qatar remained a British protectorate until 1971 when Britain decided to withdraw from the Arabian Gulf area. Qatar then adopted a provisional constitution declaring it an independent Arab country with an official religion of Islam, using Shari'a as the prime source of legislation and Arabic as an official language. The Al Thani family formally became the ruling dynasty. This period witnessed the arrival of a large number of workers particularly from Arab countries.

Qatar became an independent country on 3 September 1971. Ahmad bin Ali was the first Emir of Qatar after independence. On February 22, 1972, Khalifa Bin Hamad assumed power. In contrast to his predecessor's policies, Khalifa Bin Hamad increased spending on social programs, including housing, health, education, and pensions. In 1974, the Qatar General Petroleum Corporation took control of all oil operations in the country. Qatar rapidly became a rich country with a modern and well-developed infrastructure.

In 1993 Khalifa bin Hamad remained the Emir, but his son, Hamad bin Khalifa, the heir apparent and minister of defense, had taken over much of the day-to-day running of the country. The two consulted with each other on all matters of importance.

On 27 June 1995, His Highness Sheikh Hamad Bin Khalifa Al Thani assumed power with the support of the ruling family and the Qatari people. With his accession Qatar entered a new era of modernization and embarked on the development of a strong base for democracy. A great social, educational and political transformation is under way.

In chapter two I will discuss the emergence of the current education system in Qatar and the place of pre-school provision in this system.

Since independence, the quality of the education system in Qatar has become a subject of government concern and public discussion. However, education is still a very young area of research. This thesis is therefore presenting a new perspective on a growing area of importance, preschool education, the theories and approaches to early childhood education and the outcomes in terms of what is offered to children.

Chapter one provided an overview and background of the study. It focused on the geographical, historical and religious aspects that have affected the present preschool education in Qatar. Chapter two discusses the emergence of the current educational system and its development. It also provides the rationale of early childhood education, preschool curriculum, evaluation, study domains and parents' involvement.

2- CHAPTER TWO

BACKGROUND AND RATIONALE

The purpose of chapter two is to provide a detailed description of the development of education and the emergence of preschool education in Qatar. It also provides the rationale of early childhood education, preschool curriculum, evaluation, study domains and parents' involvement.

2.1 Background

> *As today's children are the citizens of tomorrow's world, their survival, protection and development is the prerequisite for the future of humanity. Empowerment of the younger generation with knowledge and resources to meet their basic human needs and to grow to their full potential should be a primary goal of national development. As their individual development and social contribution will shape the future of the world, investment in children's health, nutrition and education is the foundation for national development.* (UNESCO, 1995)

Over the past two decades, policymakers have increasingly become interested in preschool education. Spurred by public outcry about a crisis in education, policymakers are turning their attention to the early years, in the hope that children will be better prepared for school. State investment in early education necessitates the evaluation of the effectiveness. This is especially important in light of research findings that quality matters (Helburn 1996). This study is one step in assessing and improving the quality and effectiveness of preschool education in Qatar.

The purpose of the study is to determine the quality of preschool education currently provided by comparing the quality of Arabic speaking schools to the English speaking schools' curricula in the State of Qatar, looking at the relationship between teachers' beliefs and classroom quality, providing information about the Qatari preschool programme – its teachers and their classrooms and investigating the Qatari mothers' perception of their children's' preschool curriculum.

Using data collected through site visits, classroom observations teachers' questionnaires and mothers' questionnaires in preschools in Qatar, this study compares the quality of the curricula used in the Arabic speaking schools and the English speaking schools.

2.1.1 The Development of Education in Qatar

Before oil was discovered, the Arabian Gulf was a very poor area and there was no formal education system in Qatar. Instead, some children in villages and towns memorized passages from the Quran and learned to read and write in a kuttab, an informal class taught in mosques or homes by literate men and women knowledgeable about Islam. The teacher was called the "Al-Mutawa" or "Al-Mulla". Boys and girls were separated and they were divided according to their levels of achievement. Each kuttab had a supervisor called ''Al-Areef''. ''Al-Areef'' was one of the most intelligent and polite students who helped ''Al-Mutawa'' and he didn't need to have any Educational Certificate (Mutawwa, 1990).

Education started in Qatar in 1890 through ''Katateb'' in 1890. They taught reading writing and The Holy Quran (Ministry of Education, 1991).

In 1913 the first Islamic school for adult males was opened in Qatar ''Al-Athareya School'' under the supervision of the Emir of Qatar Sheikh Abdulla bin Jassim Al-Thani. The school was established in a wing of his palace. It was run by Muhammad Abd al Aziz al Mana, an eminent scholar who had studied under Muhammad Abduh of Egypt and Al Alusi of Baghdad.

In 1949 Sheik Hamad bin Abd Allah Al-Thani, the ruler of Qatar, opened a somewhat more modern school. The school, the Islah al Muhammadiyyah, had one teacher and fifty boys. In 1951 the school received funding from the ruling family, and the number of students and teachers increased. Subjects included Islamic religion and history, Arabic, arithmetic, geography, and English. (Mutawwa, 1990).

"By 1954 there were four such schools, with a total of 560 male students and twenty six teachers. The first girls' school funded by oil money was a small kuttab that had been run by Amina Mahmud since 1938" (ibid, p.588).

2.1.1.1 Child Education from the Islamic Perspective

Islam plays an essential role in all aspects of life in the State of Qatar and education is no exception. The concept of developmentally appropriate practice is an essential aspect of child development from the Islamic perspective. Historically, Islamic education has paid a great deal of attention to the concept of play as a desirable behavioural phenomenon. "*Play has been considered as one of the rights of a child to which adults must respond positively and which should be utilized to develop the child's growth and needs*" (Mutawwa, 1990, p.55). In

addition to the recognition of the importance of child-initiated activities, traditional cultural and social values also may affect parents' perceptions of how children should be socialized and educated.

The Islamic heritage has recognized children's right to play and have fun, realizing their need to do so, especially during their first seven years. This concept is embodied in the following famous axiom of Prophet Mohammed: *"Play with your son for seven [years], cultivate him for seven more, and accompany him for seven more"* (ibid, pp.58).

The educational reality of the importance of a child's psyche and the necessity for play were pointed out by Prophet Mohammed fifteen centuries ago. In one of the stories told about him, Mohammed noticed once how children were playing with sand, whereupon he turned to his companions and made the following famous statement: "*[Playing with] sand is the Spring of children.*" Thus we see an early strong recognition of the value of playing with sand, a practice that is commonly accepted today as being of great value and rarely is a kindergarten without a sandbox. He also stressed the importance of letting a child be carefree, and that playthings should not be taken lightly, nor should anyone look down upon a child's work, which he tries to carry out according to his development and in his own way.

Prominent Muslim philosophers also have paid attention to childhood and to recognizing a child's need to play. Among those philosophers and educators are AlGhazali and Ibn Sina, Islamic philosophers who pioneered and advocated child development. They participated in formulating educational theories relevant to child education. The educator-philosopher AI-Ghazali [a fifth century (Hjri) scholar] recommends allocating specific time to children for sport. His

view is that "*prohibiting a child from playing, and overburdening him with incessant learning, will cause his heart to die, will idle his intelligence, and will make his life miserable.*" (ibid, pp.62).

Ibn Sina was a pioneer in caring about early childhood. In his renowned book, The Canon, he outlines a daily program for looking after a child and taking care of him, including health, nutrition, and refreshing his mind by joyful play. Once the child is six, he must be given to the care of a teacher to educate him gradually, according to his abilities. This demonstrates that Ibn Sina constructed an interesting program for the child's education during his first six years, a program that includes opportunities for play. He was ahead of his time when he introduced the concept of such an organized program, one that became the basis for present-day kindergartens, not only in Islamic but also in Western cultures.

2.1.1.2 The Development of Formal Education

Formal education in the real sense started in Qatar in 1956-1957. It comprised two stages, the pre-school stage (from 5 to 7) and the primary stage (from 7 to 13). This corresponds in England and Wales to the National Curriculum key stage a (5-7 years) and key stage 2 (7-11 years) plus lower key stage 3 (11-14 years) (Ross, 2000). During the two scholastic years 1956-1957 and 1957-1958, the State of Qatar adopted a mixed curriculum from Egypt, Jordan, Syria and Saudi Arabia.

In 1958 and as a result of a decision taken by the Cultural Department of the Arab League which was initiated in the same year, elementary, preparatory, and secondary stages were considered to be the

main formal stages in public schools in Arab countries. The state of Qatar, as a member of this league, abided by this decision (Ministry of Education, 1985).

It was not until 1965-1966 when Qatar formed its own curriculum committee to develop the curriculum because there was a great sense of dissatisfaction regarding the adopted curriculum. In 1984-1985, the development of the high school curriculum was complete (Mutawwa, 1990). The present structure of the Qatari education system is as follows (Al-Hor, 1996).

1. General education, which comprises three stages:

   Elementary Stage: Six years (6-12 years)

   Preparatory Stage: Three years (13-15 years)

   Secondary Stage: Three years (16-18 years)

2. Technical (secondary stage).

3. Commercial (secondary stage).

4. Religious: preparatory and secondary stages

5. Functional rehabilitation institutes:

   (a) Languages Institute (for non-Arabic speakers). This institute aims mainly at teaching Arabic to expatriates in Qatar.

   (b) Administration Institute (two-year course). It provides in-service training to managers in government departments.

The country now has 113 elementary schools (60 for boys and 53 for girls), 56 preparatory schools (28 for boys and 28 for girls), and 41 secondary schools (19 for boys and 22 for girls). Government schools

provide free education for the Qatari children and for the children of non-Qatari residents who work for the public sector. These educational services are available to all students in all parts of the State.

6. Higher Education

University education in Qatar started in the seventies when two colleges of education, one for male and one for female students, were established in 1973. The new campus for Qatar University was officially inaugurated in 1985. The university consists of the following seven faculties,

- Faculty of Education
- Faculty of Humanities and Social Sciences
- Faculty of Science
- Faculty of Islamic Studies
- Faculty of Administration and Economics
- Faculty of Engineering
- Faculty of Technology

All the above faculties have branches in the male and female student sections with the exception of the Faculty of Engineering, which is available to male students only. The academic staff has a large number of specialists from Qatar, all Arab countries and some foreign countries. The university has more than eight thousand students.

A large number of Qataris, particularly male students, attend universities outside the state. Universities in the USA and UK, in

particular, have a large number of Qataris studying for higher degrees. The Ministry of Education and Culture grants a large number of scholarships to enable these students to obtain the highest degrees from the best universities.

Qatar also has a number of private colleges particularly for female students.

The school system in Qatar is centralised. The power of decision-making, appointment, promotion and dismissal of staff, curriculum development, textbook -production and instruction on school routines and policies is in the hands of the Ministry of Education. (Al-Hor, 1996).

Broad aims of Education in Qatar:

The Ministry of Education Report (1985) indicates the broad aims of education in Qatar are:

(a) Deep-rooting religious education. This is achieved by indoctrinating in the younger generation a true belief in Allah, the Sole Creator. This develops the children's sense of piety and inculcates Islamic values and concepts in their minds to prevail over their behaviour and future life-practices.

(b) Developing a sense of affiliation and loyalty. This is accomplished by developing deep-rooted affiliation to homeland, then to region, and then to the whole Arab nation. It has also been realised that a sense of pride in their religion and the legacy of

their nation, with all its depth, genuineness and cultural loftiness, can be engendered in the minds of the new generation.

This can be achieved by presenting the contributions of Muslims in all fields of science and knowledge, and by emphasising the pioneering role and contributions of Islamic civilisation in building contemporary human civilisation. These are ideals which, however, appear not so far to have been achieved.

It is evident from the above that religious education is one of the priorities for the education system in Qatar. Educational objectives at every stage are expected to emphasize religious values because they are derived from the broad aims of education (Ministry of Education Annual Report, 1992).

Objectives of Education in Qatar:

The following statements are among the objectives of education in Qatar as they appear in the report (ibid., p.p. 76-79)

1. Building in individuals a comprehensive personal awareness of his or her national and human role and adhering - in its individual or collective conduct - to the sublime Islamic and Arab ideals.

2. Achievement of the cohesiveness of Arab Islamic society through deep-rooted unity of thought, action and destiny.

3. Developing the proper affiliations of the Qatari citizen, namely affiliation to Qatar, the Gulf, Arabism, Islam and humanity at large.

4. Preservation of the Arab-Islamic personality of Qatari society, its genuine traditions and the intellectual and cultural Arab and Islamic heritage.

5. Opening up to the world, with its technological and scientific innovation, in order to incorporate those elements of progress and modernity that accord with the Arab-Islamic social pattern of society.

6. Fostering and promoting educational and cultural relations between Qatar and the Arab and Islamic countries, on the one hand, and the other countries of the world, and the international and regional organisations working for humanity, on the other.

3.1.1.3 Qatar Education Reform Initiative "Education for a New Era"

In May 2001 Qatar began developing a comprehensive education reform initiative. A thorough study of the school system conducted by a team of experts from RAND Corporation - a non-profit research organization providing analysis and solutions that address the challenges facing the public and private sectors around the world- revealed that the current system was overly centralized, bureaucratic and rigid, producing outcomes that were inadequate for Qatari families and insufficient to sustain the nation's growth. The study also revealed that the system did not have enough emphasis on science, English and the Internet and placed too much stress on memorization and teacher control. They recommended an entirely new system, based on parent choice that would eliminate the centralized model prevalent in most Arab countries and

bypass the tradition-bound Education Ministry. Without reform, there was little prospect of improvement. (SEC, 2002)

In 2002 the Emir took formal steps to adopt the Rand plan. In November 2002, an Emiri decree established the Supreme Education Council (SEC) to serve as Qatar's leading authority on education policy and to oversee the reform effort. The decree also created the Evaluation and Education Institutes to operate within the SEC and to have direct responsibility in planning and implementing education reform. **Education for a New Era** was borne of their efforts.

Unlike earlier education reform efforts in Qatar, **Education for a New Era** takes a structural and systemic approach, evaluating every aspect of our education system. The objective is to integrate improvements into Qatar's school system that reflect the principles of Autonomy, Accountability, Variety and Choice. (SEC, 2002)

Such reforms have aroused debate around the Arabian Gulf, where they have been widely criticized as U.S.-imposed. A leading Saudi newspaper, al Watan, wrote about the Qatar program as having originated with the "*Jewish foundation,*" as it described Rand. *"How can the Americans know what is right for Qatari schoolchildren?*" asked a professor at Kuwait University. "*Reform is something that must come from within, it cannot be bought*" he added.

The Qatar education reform initiative accomplishes the improvements through the implementation of four essential elements:

- A systematic, objective monitoring and evaluation of student learning and school assessment.

- The establishment of new innovative schools, guided in their teaching by internationally competitive curriculum standards in Arabic, English, mathematics and science.
- The gradual phase-in of reforms over time to build local capacity and ensure that Qatari culture, values and beliefs are preserved.
- On-going evaluations to allow for adjustments and ensure quality.

The overall goal of **Education for a New Era** is to create a modern, world-class education system that provides Qatari children with the skills and capabilities they will need to compete in the global economy of the 21st century. Skills such as critical thinking, problem-solving, communications and teamwork are important not only in the workplace but also contribute to success in life. (SEC, 2002) And, of course, such skills underpin the National Curricula of other countries such as England, Wales (OFFCTED, 2001), France, New Zealand and Thailand.

There are two key elements to reform: (1) new government-funded Independent Schools and (2) annual student assessments and surveys to help monitor and improve student learning and school performance.

The Supreme Education Council has embarked on a five-year plan aimed at turning 140 government schools, out of the existing 220, into independent schools self-managing institutions guided by international curriculum standards.

The curriculum standards set out what Qatari students should know, understand and be able to do in each grade from Kindergarten to Grade 12. The standards cover four core academic subjects: Arabic,

English, mathematics and science. The standards are based on the premise that all Qatari students are capable of learning successfully and of achieving high levels of performance. They are aligned to expectations in those countries that demand the most of their students, including those that achieve excellent results in international tests.

Twelve Independent Schools were opened in September 2004, followed by 20 schools opened in 2004. Other 32 school are to be opened in September 2006. Independent School operators were selected through a rigorous application and approval process conducted by the Education Institute of the Supreme Education Council, which regularly monitor and support the schools.

Preschoolers in the new system are part of the primary school. Primary schools include children from the kindergarten to grade four (4 years up to 10). The preschool curriculum in these preschools is guided by the SEC standards in the four core academic subjects: Arabic, English, mathematics and science. Although it is still too early to evaluate these schools and curriculum, the researcher made several visits to two of the four working primary schools. Interviews with the headmasters and preschool coordinators were held in addition to classroom visits. The impressions the researcher had after these visits can be summarized as follows:

- Although teachers have in-service training, they are still confused regarding the teaching methods to be applied to meet the SEC standards. This is not surprising because the teachers in these schools lack qualification in early childhood education. Some have earned college or graduate degrees in Arts or science, while others possess a high school diploma or its equivalent.

- The classroom environment seems to be much better than the privately owned preschools evaluated in this study. The availability of corners and materials make the children happy and more motivated.
- More focus is given on the four core subjects, especially on English, mathematics and science.
- The lack of book resources is still an issue. Teachers mostly depend on photocopying to make the materials available to children.
- Most teachers think that the SEC standards are very difficult to be achieved by preschool children.

There is no doubt that The "Education for a New Era" reform represents a significant departure from the past and a far-reaching vision for the future. The overall vision of the reform had a ten-year implementation timeframe. It is, of course, too early to determine whether or not the reform as a whole, or which part, is successful.

Establishing a system that relies on parents having freedom to choose from among a variety of schooling options in the government sector is quite an accomplishment, particularly in a region where the principles of choice and variety are largely unknown. In addition to the choice offered, parents have more of a presence and voice in the new schools.

The decision by the Qatari leadership to adopt a system-changing design was risky, as it involved forming new institutions, changing educational standards, and establishing an accountability framework. Their decision to implement the reform within a very short timeframe increased the risk. It is too soon to tell how well these mechanisms will

work to raise education quality. System-changing policy instruments may require long periods of time to produce their expected effects. Furthermore, the history of education reform efforts teaches us that the process of planned educational change is usually more complex than initially anticipated. This is largely due to the number of players involved and the number of factors that must be aligned to support fundamental change.

A reform starts with a small group of people who share the same vision and goals. As the reform is implemented, the number of people involved expands dramatically. As the number of participants grows, it is challenging to maintain fidelity to the original vision and, indeed, it may sometimes be advisable to alter the implementation to suit the realities of the situation. As the reform unfolds, it will be important for Qatar to balance the contributions of international experts with the need to develop local capacity to manage and extend this reform

2.1.1.4 The Development of Private Education in Qatar:

Private education started in Qatar started in 1969 with 686 pupils, 360 males and 326 females (Ministry of Education, 1991).

Since then, the number of schools and pupils has largely increased. In 1991 the Ministry of Education adopted a plan for the development of private education based on increasing financial support to private schools and strips of land for the buildings. This plan extended from 1991/92 to 1995/96

In 1991, the Cabinet agreed to support private education as follows:

1. Providing private schools with female principals if requested by the owners.

2. Recruitment of one female teacher for each kindergarten.

3. Contributing of the present level of support to private schools in terms of books, stationary, teaching aids, educational supervision, health care and exception from power and water supply charges. (Turki, 1995)

This policy led to an increase in the number of private schools, particularly following the decision by the government not to admit children of private sector employees to public schools.

As a result we have a large number of expatriate schools currently being operated in Qatar. The choice of institutions is expanding, but as in most countries the cost of private education is relatively high. Most of the large communities have their own schools- and there are now private schools following the full or modified national curricula of the UK, USA, France, Norway, Japan, Philippines, India, Pakistan, Bangladesh, Iran, Egypt, Lebanon, Jordan, etc. While these are designed in principle to serve the respective community, some (the British, French and American schools) are also attended by the children of well-off Qatari families.

Most of these schools start with kindergarten and primary classes up to the higher secondary classes. In addition to that, Institutes like Shaqab College of Design Arts offers girls the opportunity to study up to the degree level locally, through courses designed and administered by Virginia University in the United States.

The following tables and figures show the number of pupils in private schools in Qatar from 1990/91 to 2000/01.

Table 2.1
Number of pupils in Arabic private schools in Qatar from1990/91 to 2000/01

Year	Male	Female	Total
90/1991	4995	4165	9160
91/1992	5576	4780	10356
92/1993	5746	4883	10629
93/1994	6073	4912	10985
94/1995	6095	4621	10716
95/1996	6816	5662	12478
96/1997	7499	5989	13488
97/1998	8235	6009	14244
98/1999	8656	6320	14976
99/2000	8868	6476	15433
2000/2001	9399	6625	16024

Figure 2.1

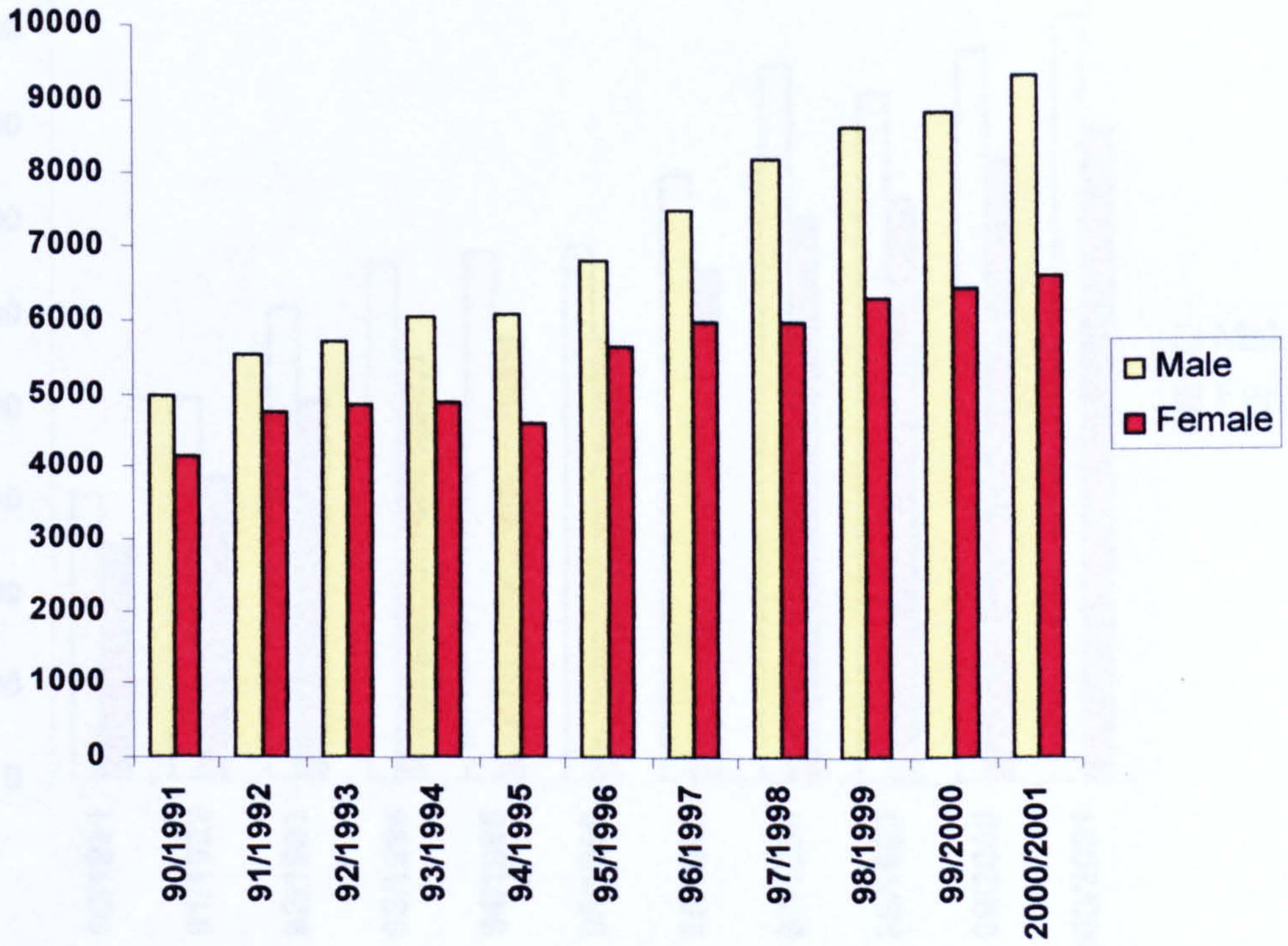


Table 2.2

Number of pupils in foreign private schools and in Qatar from 1990/91 to 2000 /2001

Year	Male	Female	Total
90/1991	6118	5037	11155
91/1992	8236	6515	14751
92/1993	10186	8257	14751
93/1994	11134	9137	20271
94/1995	11374	9576	20950
95/1996	11444	9538	20982
96/1997	13047	10970	24017
97/1998	15386	12114	27500
98/1999	14830	12530	27360
99/2000	15741	13431	29172
2000/2001	16488	14091	30579

(Ministry of Education Annual Report (2001-2002) p.p. 12-17

Figure 2.2

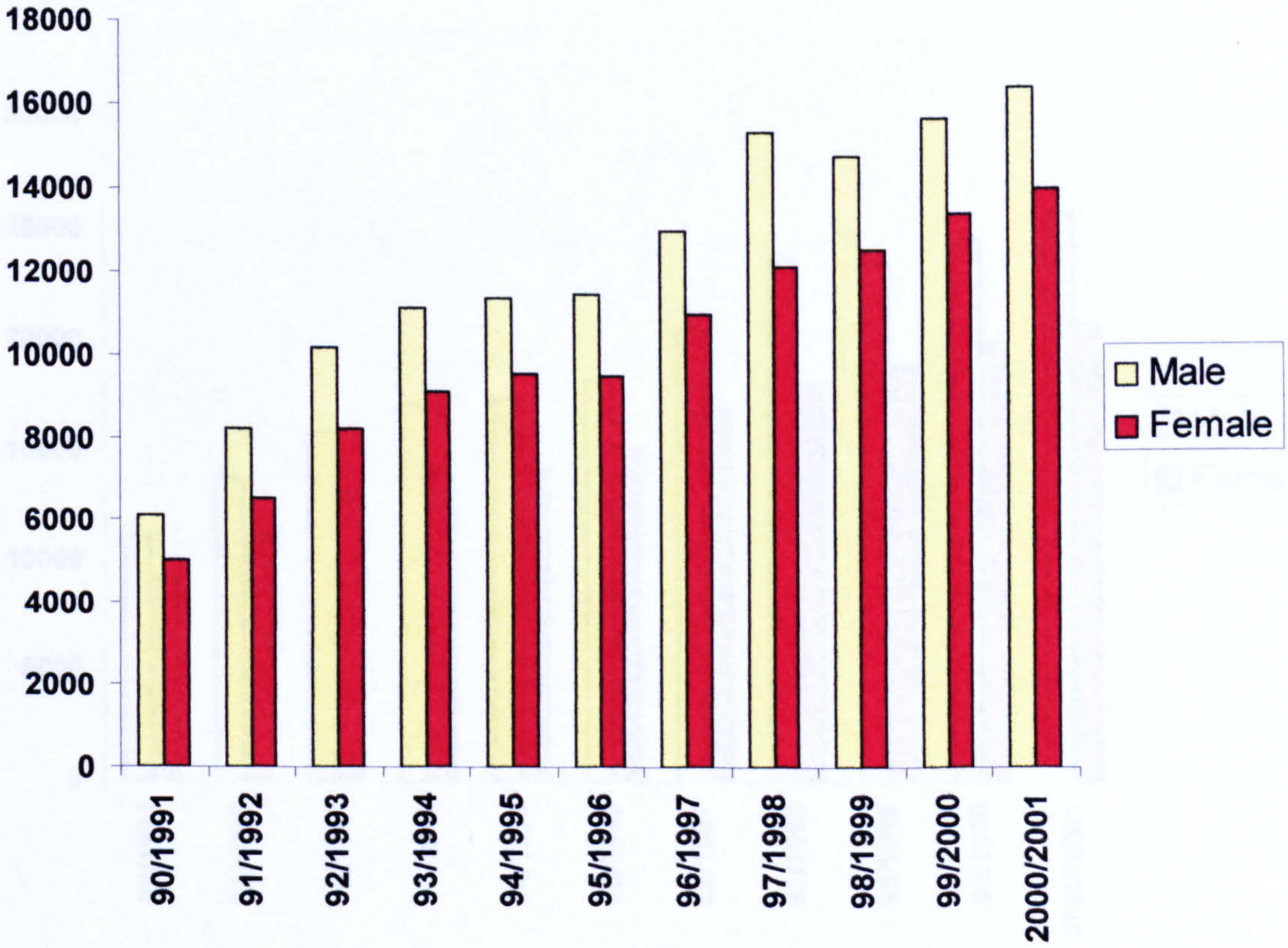
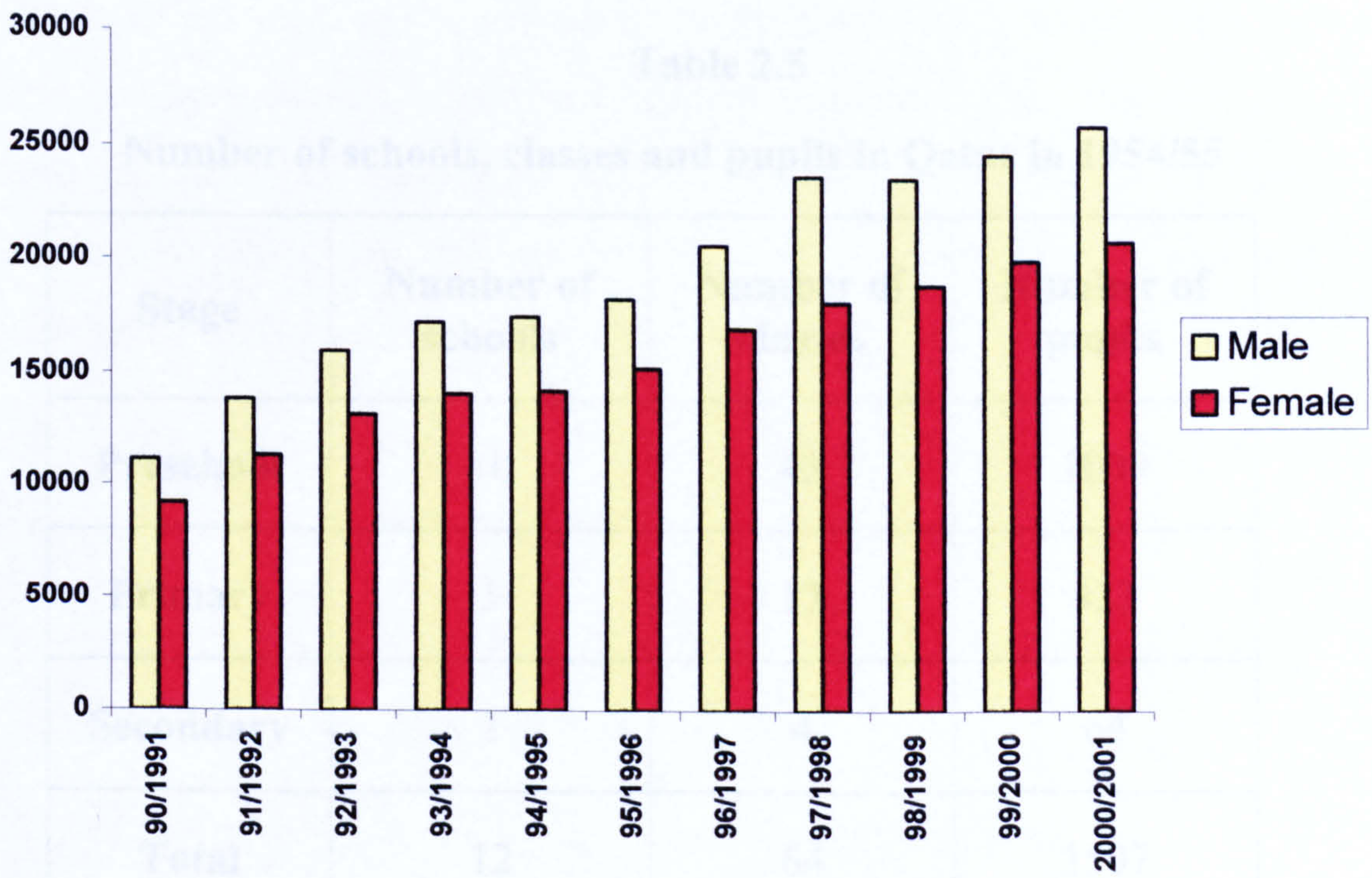


Table 2.3
Number of pupils in private schools in Qatar
from 1990/91 to 2000 /2001

Year	Male	Female	Total
90/1991	11113	9202	20315
91/1992	13812	11295	25107
92/1993	15932	13140	29072
93/1994	17207	14049	31256
94/1995	17469	14197	31666
95/1996	18260	15200	33460
96/1997	20546	16959	37505
97/1998	23621	18123	41744
98/1999	23486	18850	42336
99/2000	24609	19907	44516
2000/2001	25887	20716	46603

(Ministry of Education Annual Report (2001-2002) p.p. 12-17

Figure 2.3



2.1.2 Preschools in Qatar

At the beginning of the school year 1954/55 the first educational system was organized. The Education Scale was as follows:

Table 2.4

The Education Scale in Qatar in 1954/55

Stage	Number of years	Age
Preschool	2	from 3-5 years
Primary school	6	from 6 – 12 years
High school	5	from 13-18 years

In 1955/56 ten government preschools were opened and the number of schools was as follows: (Gunaim, 1992, P. 35)

Table 2.5

Number of schools, classes and pupils in Qatar in 1954/55

Stage	Number of schools	Number of classes	Number of pupils
Preschool	10	43	1009
Primary	1	17	423
Secondary	1	4	64
Total	12	64	1507

At the beginning of the 1961 and as a result of a decision taken by the Cultural Department of the Arab League, the pre-school stage was cancelled from the educational scale. As a result, the educational Scale in Qatar became as follows:

Stage	Number of years	Age
Primary school	6	from 6 – 12 years
High school	5	from 13-18 years

Since then, the private sector started building pre-schools with the state's support. Such schools were in great demand because of the large number of expatriates in Qatar and their needs to go to work and leave their children in pre-school. The Ministry of Education encouraged these schools and supported the private sector to build them under the ministry's administrative, health and social supervision.

In 1967, the first act to organize private school was issued and it was modified in 1980. The ministry made great efforts to convince the state policy makers to open government preschools, but these efforts were in vain. The ministry was told to encourage citizens to open preschools under its full supervision and support (Qatar National Committee for Education, 1999).

Since then, the support of the Ministry of Education to the private preschools has included: (ibid. p.3)

1. Annual financial support of two million Qatari Riyals for all private schools including preschools.

2. Exemption from electricity and water consumption fees.

3. Appointing one Ministry- paid teacher for each school.

4. Providing books based on the Experiential Curriculum

5. Educational supervision by specialized supervisors to ensure the efficient implementation of the curriculum.

6. Administrative supervision by the ministry's departments to ensure the implementation of the ministry's laws and rules.

In 1987, a ministerial decision (32) was taken to form an educational committee to produce a scientifically based unified curriculum for preschools to be applied in all private preschools in Qatar. The aim was to design a curriculum which has an articulated description of its theoretical base that is consistent with prevailing professional opinion and research on how children learn. In 1989, the Experiential Curriculum, which is based on the theory of experiential learning, was put into practice. (ibid. p.11)

The curriculum consisted of five areas of experiences related to:

1. People
2. Water
3. Plants
4. Animals
5. Transportation

Each of these areas of experiences is dealt with on two levels:

- Level one: for children 3- 4 ½ years
- Level two: for children 4 ½ - 6 years

2.1.2.1 Preschool Curricula in the State of Qatar

Since 1961, preschools in Qatar have been run by nongovernmental organizations. Since then, the support of the Ministry of Education to the private preschools has included annual financial support, appointing one Ministry- paid teacher for each school, providing books based on the Experiential Curriculum, and educational supervision by specialized supervisors.

Preschools in Qatar can be categorized into two types: Arabic speaking preschools and English speaking preschools. The curriculum adopted by the Arabic preschools is the governmentally designed Experiential Curriculum, which is based on the theory of experiential learning, and was put into practice in 1987. On the other hand, the majority of the English speaking preschools follow the National Curriculum for England - Foundation Stage.

2.1.2.2 The Arabic Speaking Preschool Curriculum:

The preschool curriculum in the state of Qatar adopts a philosophy based on providing children with the opportunities to do tasks and activities that develop their skills and social behaviour under an adequate educational supervision and direction. This philosophy focuses on:

- Respecting the child and giving him the opportunities to express himself and let him do the activities without unnecessary interruption

- Ensuring the child independence and self confidence to help him

build his own personality

- Giving the child the freedom to do what he wants to do without disturbing others and under the teacher's guidance and observation.

- Keeping a balance between quantity and the quality concerning what is being introduced to the child.

- Considering the development of the child intellectually, physically, socially and emotionally according to his age group characteristics.

- Considering the preschool a normal extension from home and a step towards the primary school.

- Harmonizing with the Islamic doctrine and the original Arab culture so that it will gain the society's satisfaction and support.

- Following up the latest theories of education in general and child rearing in specific. (Ministry of Education, Annual Report (2001-2002), p.p.9-10)

The Ministry of Education identified general objectives of pre-schools in Qatar. These include the following:

- Raising children on the belief in God , love of Islam and sticking to its principles and values

- Enhancing love of homeland and belonging to the Arab Islamic nation.

- Providing language skills such as listening, comprehension and

speaking through adequate interactive activities

- Developing children's readiness to learn reading, writing and Mathematics through guided play.

- Considering children's desire to learn and meeting their needs to explore and discover.

- Providing children with some religious, scientific and social concepts suiting their intellectual development stage.

- Helping children to achieve a normal emotional growth that leads to self-respect and acceptance.

- Developing children's artistic and aesthetic appreciation and developing the skills of expressing this through movement and acting.

- Developing the spirit of initiation, group work, voluntary work and innovation

- Achieving an integrated physical development which enables children to follow the adequate healthy habits while washing, eating, playing and working.

- Developing children's senses and abilities to observe nature and local environment and learning to protect its components.

- Providing children with positive social skills that guide their behaviour and interaction with their peers and make them consider group work and respect the values of family and society.

- Preparing children to join formal education environment and to respect school rules and regulations. (Ministry of Education, 1994).

The Ministry also translated these general objectives into key areas of learning which include:

1. Religious education:
2. The Language Experiences:
3. Mathematical concepts: Matching and Sorting, Ordering and Sequencing, Numbers, Recognizing shapes and sizes, Measurements and Weights, Money, Time relations, Spatial relations, and Cause/ effect relations
4. Basic scientific concepts
5. Health and Safety
6. Personal, social and emotional development: Personal development and Social Relation
7. Artistic education
8. Music and Song
9. Physical development and perception : The Senses, Developing large muscles and Developing small muscles (Ministry of Education, 1988, pp.5-14).

The prescribed books included five experiences related to:

1. People Experience

2. Water Experience

3. Plant Experience

4. Animal Experience

5. Transportation Experience

Each of these experiences is dealt with on two levels:

- Level one: for children 3- 4 ½ years
- Level two: for children 4 ½ - 6 years

2.1.2.3 The English Speaking Preschool Curriculum:

In these schools the National Curriculum of England has been adopted. The Nursery and Reception classes are taught the English Foundation Stage Curriculum. The Rationale for this curriculum is that:

- Children develop rapidly during the early years—physically, intellectually, emotionally and socially.
- Children learn when they feel included, secure and valued.
- Early years experience should build on what children already know and can do. Parents and practitioners should work together.
- There should be opportunities for children to engage in activities planned by adults and also those that they plan or initiate themselves.

- Well planned, purposeful activity and appropriate intervention by practitioners will engage children in the learning process.

- For children to have rich and stimulating experiences, the learning environment should be well planned and well organized. (QCA, P.2)

The curriculum for the foundation stage should underpin all future learning by supporting, fostering, promoting and developing children's:

- **personal, social and emotional well-being**: in particular by supporting the transition to and between settings, promoting an inclusive ethos and providing opportunities for each child to become a valued member of that group and community so that a strong self-image and self-esteem are promoted;

- **positive attitudes and dispositions towards their learning**: in particular an enthusiasm for knowledge and learning and a confidence in their ability to be successful learners;

- **social skills:** in particular by providing opportunities that enable them to learn how to cooperate and work harmoniously alongside and with each other and to listen to each other;

- **attention skills and persistence**: in particular the capacity to concentrate on their own play or on group tasks;

- **language and communication**: with opportunities for all children to talk and communicate in a widening range of situations, to respond to adults and to each other, to practise and extend the

range of vocabulary and communication skills they use and to listen carefully;

- **reading and writing**: with opportunities for all children to explore, enjoy, learn about and use words and text in a broad range of contexts and to experience a rich variety of books;

- **mathematics**: with opportunities for all children to develop their understanding of number, measurement, pattern, shape and space by providing a broad range of contexts in which they can explore, enjoy, learn, practise and talk about them;

- **knowledge and understanding of the world:** with opportunities for all

- children to solve problems, make decisions, experiment, predict, plan and question in a variety of contexts, and to explore and find out about their environment and people and places that have significance in their lives;

- **physical development:** with opportunities for all children to develop and practise their fine and gross motor skills and to increase their understanding of how their bodies work and what they need to do to be healthy and safe;

- **creative development**: with opportunities for all children to explore and share their thoughts, ideas and feelings through a variety of art, design and technology, music, movement, dance and imaginative and role play activities. (QCA, P.10)

The key learning areas of this curriculum are:

- Personal, social and emotional development.
- Communication, language and literacy.
- Mathematical development.
- Knowledge and understanding of the world.
- Physical development.
- Creative development. . (QCA, P.12)

2.2 Rationale

2.2.1 Benefits of early childhood education

Why is early childhood education important? For many years now, evidence of the positive long-term educational and cost-benefits of quality preschool programs have been provided by several of studies.in the United Kingdom and United States.

Regarding school outcomes, Zill et al. (1995) surveyed parents of a representative sample of 4;423 children, three to five years of age, who had not yet attended preschool. It was found that young children who attended preschool programs attained significantly more pre-literacy skills and numeracy skills than did a comparative group of children who had not attended such programs. Reynolds (2000) concluded that students' preschool participation at age four was significantly associated with higher reading and mathematics achievement and with lower

incidence of grade retention than their counterparts when the students were in sixth grade.

With regard to lasting effects of preschool programs, 11 research studies were developed by The Consortium for Longitudinal Studies (1983) in which preschool experiences of approximately 1,000 disadvantaged children were investigated. Children who participated in preschool programs were compared to children with no preschool experiences. Findings were children who participated in preschool programs: (a) had significant increases in IQ scores; (b) maintained gains in IQ scores for three to four years; (c) scored higher on reading achievement tests through third grade than did children with no preschool experience; (d) scored higher on mathematics tests through the fifth grade than children with no preschool experience; (e) were placed less frequently in special education classes than were children with no preschool experience; (f) were more likely to be promoted than children with no preschool experience; and (g) were more likely to earn a high school diploma than children without preschool experience.

In relation to school readiness, Frede and Barnett (1992) reported that disadvantaged children who participated in high quality preschool programs had increased academic skills in first grade. In a similar study, Cates (1995) compared at risk students who participated in an early intervention preschool program to at risk students who received no intervention. The "At risk preschool group" scored higher on the Preschool Language Scale and the Peabody Picture Vocabulary Test Revised than did the at risk group with no intervention.

In a longitudinal study conducted by Larsen and Robinson (1989), advantaged children who had attended a high quality preschool

program were compared to advantaged children with no preschool experience. Results were the children with preschool experience, particularly males, had higher achievement scores in third grade than the comparison group of children with no preschool experience. Similarly, Warash (1991) found that advantaged children who attended a preschool program attained higher mean scores for academic self-esteem in second and third grade and higher mathematics and reading scores in first and third grade than advantaged students who had attended day care or had no preschool experience.

Cost-benefits, as well as educational benefits, have been found for children who attend high quality preschool programs. Glantz, Goodson, and Layzer (1991) conducted an evaluation of Project Giant Step, a program funded by New York City to provide comprehensive services to all four-year-old children in the city. Educational benefits, as well as cost-benefits, of the program were examined. Glantz et al. found that the program had a significant positive impact on children's cognitive performances and the educational effects of the program were directly related to the cost of the program. Thus, the higher the program's expenditures per child, the higher the average cognitive gains of the children who participated in the program are.

In a study conducted by the Ohio Department of Education (1992), children who attended at least six months of some type of preschool program had lower grade retention rates and were less likely to be placed into remedial programs in the elementary grades than children with no preschool experience. Therefore, additional money that would have been spent to support retention and remedial programs was saved.

Recognizing the benefits and effects of early childhood experiences, educators and policymakers should decide the extent in which the availability of preschool programs is to be assured for all children.

2.2.2 Criteria of quality preschool programmes

Two generally accepted approaches to measuring the quality of early childhood programs focus on process and structure. (Espinosa, 2002)

Process Quality

Process quality emphasizes the actual experiences that occur in educational settings, such as child-teacher interactions and the types of activities in which children are engaged. Process measures can also include health and safety provisions as well as materials available and relationships with parents.

Process quality is typically measured by observing the experiences in the centre and classrooms and rating the multiple dimensions of the program, such as teacher-child interactions, type of instruction, room environment, materials, relationships with parents, and health and safety routines. (ibid, p.5)

The Early Childhood Environmental Rating Scale (ECERS) has been widely used in early education research to measure process quality. It was developed, revised and validated by Thelma Harms, Richard Clifford and Deborah Cryer (1998).The revised edition includes 43 items organized into seven areas of centre-based care for children aged 2.5

through 5 years. The areas are: personal care routines, space and furnishings, language reasoning, interaction, activities, program structure, and parents and staff. Each item has detailed descriptors and can be rated from 1-7, with (1) inadequate, (3) minimal, (5)good, and (7) excellent. When the activities and interactions are rated higher, children develop more advanced language and math abilities, as well as social skills. Conversely, poorer process quality has been linked to increased behaviour problems.

Structural Quality

The second way to measure quality is to review the structural and teacher characteristics of the program, such as teacher-child ratios, class size, qualification and compensation of teachers and staff, and square footage. (ibid, 7)

The structural features of a program are thought to contribute to quality in more indirect ways than process features. Structural features are frequently regulated through state licensing requirements. Researchers have consistently found that these two sets of indicators—process and structure—are related, and influence the quality of the educational experiences for children. For example when groups are smaller, teachers tend to have more positive, supportive, and stimulating interactions with children. Warm and nurturing interactions are directly linked to children's social competence and future academic success, and such interactions are essential to high quality. Early childhood teachers who are more highly qualified and have smaller groups can more effectively provide individualized, responsive learning opportunities. Finally, higher teacher wages have consistently been linked to higher

process quality. Ratios, an indicator of structural quality, are also associated with process quality. That is, higher ECERS scores are more likely in programs with lower child-teacher ratios.

Other components for high quality preschool programs have been noted by researchers and educators. The following 10 signs of characteristics of quality preschool programs were developed by the NAEYC (1997):

1. Children have access to various activities throughout the day.
2. Children have an opportunity to play outside everyday.
3. The teachers work with individual children, small groups, and the whole group at different times throughout the day.
4. Children spend most of their time playing and working with materials or other children.
5. Classrooms are decorated with children's original artwork.
6. Children work on projects but also have long periods of time to play.
7. Teachers read books to children individually or in small groups.
8. Children learn letters and numbers in the context of their everyday experiences.
9. The curriculum is adapted for those children who are advanced academically, as well as those children who need additional help.
10. Children and their parents look forward to school.

Reynolds, (2000) lists several characteristics consistent among high-quality educational programs that have demonstrated significant positive outcomes on measures of children's academic and social-emotional development. These are—

- The program contains a clear statement of goals and philosophy that is comprehensive and addresses all areas of child development, including how the program will develop children's cognitive, language, and early reading skills, the cornerstones of later school success.

- Children are engaged in purposeful learning activities and play, and are taught by teachers who work from lesson and activity plans.

- Instruction is guided by a coherent curriculum that includes meaningful content (such as science) and has a strong and systematic focus on cognitive skills, including the language, early reading, writing skills and math skills children need to develop before they enter kindergarten.

- Instruction is always intentional, and frequently is direct and explicit. There is a balance between individual, small-group, and large-group activities.

- The classroom environment is one where children feel well cared for and safe. It also stimulates children's cognitive growth and provides multiple and varied opportunities for language and literacy experiences.

- Teachers frequently check children's progress. Ongoing assessment allows teachers to tailor their instruction to the needs of individual children as well as identify children who may need special help.

- The preschool staff regularly communicates with parents and caregivers so that caregivers are active participants in their children's education.

- Services are sufficiently intensive to allow more time for children to benefit from cognitive experiences. Preschools that operate for a full day, on a year-round basis, or have provided children with two years of preschool, show better results than those that offer less intense services (Reynolds, 2000).

Quality preschool education in the context of this study combines both process and structural criteria. Quality of preschool curriculum in Qatar is measured using the seven domains of the study: mathematical development, knowledge and understanding of the world, creative development, communication language and literacy, personal, social and emotional development, physical development, and the environment.

2.2.3 Rationale for Preschool Curriculum

From what has been written so far, it is clear that the preschool curriculum is more than a collection of enjoyable activities. It is a complex idea containing multiple components, such as goals, content, pedagogy, and instructional practices. Curriculum is influenced by many factors, including society's values, content standards, accountability systems, research findings, community expectations, culture and language, and individual children's characteristics.

Definitions and issues about the sources and purposes of curriculum have been debated for many years (Hyson 1996; Marshall, Schubert, & Sears 2000; & Eisner, 2002). Whatever the definition, a good, well-implemented early childhood curriculum provides developmentally appropriate support and cognitive challenges and, therefore, is likely to lead to positive outcomes (Frede, 1998). A

recurring theme in recent research syntheses has been that curriculum in programs for infants through the primary grades must be comprehensive, including attention to social and emotional competence and positive attitudes or approaches to learning (Peth-Pierce 2001; Raver 2002). Another emphasis is on the implementation of curricula providing cultural and linguistic continuity for young children and their families.

"Curriculum that is goal oriented and incorporates concepts and skills based on current research fosters children's learning and development" (Commission on NAEYC Early Childhood Program Standards and Accreditation Criteria 2003).

But what should children learn through this curriculum? The answer is influenced by children's ages and contexts. For example, for babies and toddlers, at the curriculum's heart are relationships and informal, language-rich, sensory interactions. For second graders, relationships continue to be important as a foundation for building competencies such as reading fluency and comprehension. And for young children of all ages, the curriculum needs to build on and respond to their home languages and cultures.

Researchers have found that young children with and without disabilities benefit more from the curriculum when they are engaged or involved (Raspa, McWilliam, & Ridley 2001; NCES 2002). Particularly for younger children, firsthand learning—through physical, mental, and social activity—is key. At every age from birth through age eight (and beyond), play can stimulate children's engagement, motivation, and lasting learning (Bodrova & Leong 2003). Learning is facilitated when children can "choose from a variety of activities, decide what type of

products they want to create, and engage in important conversations with friends" (Espinosa 2002, P. 5).

There is a widespread agreement that curriculum—including early childhood curriculum—should be based on evidence and evaluated for its effectiveness (National Research Council, 2001). However, a body of longitudinal evidence does describe the long-term effects of some specific curriculum models or approaches—with benefits identified for curricula that emphasize child initiation (Schweinhart & Weikart 1997; Marcon 1999, 2002) and curricula that are planned, coherent, and well implemented (Frede 1998; National Research Council 2001). Evidence is also accumulating about development, learning, and effective early childhood curriculum in specific areas such as language and literacy (Dickinson & Tabors 2001) and mathematics (NAEYC & NCTM, 2002). Despite this evidence, there is still much we do not know. The forthcoming results of research on early childhood curriculum and other studies may help educators make better-informed decisions when adopting or developing curriculum. The goal is not to identify one "best" curriculum—there is no such thing—but rather to identify what features of a curriculum may be most effective for which outcomes and under which conditions.

2.2.4 Rationale for Curriculum Evaluation

Evaluation in early childhood preschools should consider all aspects of children's development and learning, and should focus on individual attainments in ways that acknowledge the immediate context.

Such regular observations of children interacting with materials and people provide the basis for monitoring unique patterns in each child's development and learning. Regular observations form the basis for planning how to nurture, enhance and enrich the unique abilities of individual children, while also enabling each individual to develop skills necessary to make effective contributions to social living.

With increased public investments in early childhood education come expectations that programmes should be accountable for producing positive results (Scott-Little, Kagan, & Clifford 2003). The results of carefully designed programme evaluations can influence better education for young children and can identify social problems that require public policy responses if children are to benefit.

Programme evaluations vary in scope from a relatively informal, ongoing evaluation that a child care centre might conduct to improve its services, to large scale studies of the impact of statewide preschool initiatives (Gilliam & Zigler 2000; Schweinhart 2003), to district and statewide evaluations of children's progress in the early grades of school. As part of this effort, programme monitoring is an important tool for judging the quality of implementation and modifying how the programme is being implemented.

The higher the stakes for programmes and public investments, the more critical and rigorous should be the standards for evaluation design, instrumentation, and analysis, although this is not always the case (Henry 2003; Scott-Little, Kagan, & Clifford 2003). Evaluation specialists (for example, Shepard, Kagan, & Wurtz 1998; Jones 2003) emphasize that the goals of programme evaluation are different from the goals of classroom-level assessment intended to improve teaching and learning.

These specialists further emphasize that many instruments originally designed for one purpose cannot be validly used for other purposes. When such efforts are undertaken, special attention is needed to issues of sampling and aggregation (Horm-Wingerd, Winter, & Plocfchan 2000; Scott-Little, Kagan, & Clifford 2003). Of particular importance is the issue of alignment—in this case, alignment of evaluation instruments with the identified goals of the programme and with the curriculum or intervention that is being evaluated. Mismatches between programme goals and evaluation design and instruments may lead to erroneous conclusions about the effectiveness of particular interventions (Yoshikawa & Zigler 2000; Muenchow 2003).

4.2.5 Rationale for the Study Domains:

The purpose of this study was to investigate the quality of preschool education in the State of Qatar in terms of seven domains. These are:

1. Mathematical development
2. Knowledge and understanding of the world
3. Creative development
4. Communication language and literacy
5. Personal, social and emotional development
6. Physical development
7. Environment

Mathematical development:

Mathematics provides a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It is a useful tool and is an integral part of our culture.

Mathematical development depends on becoming confident and competent in learning and using key skills. This area of learning includes counting, sorting, matching, seeking patterns, making connections, recognising relationships and working with numbers, shapes, space and measures. Mathematical understanding should be developed through stories, songs, games and imaginative play, so that children enjoy using and experimenting with numbers, including numbers larger than 10. To give all children the best opportunities for effective mathematical development, practitioners should give particular attention to:

- many different activities, some of which will focus on mathematical development and some of which will draw out the mathematical learning in other activities, including observing numbers and patterns in the environment and daily routines;

- practical activities underpinned by children's developing communication skills;

- activities that are imaginative and enjoyable;

- help for those children who use a means of communication other than spoken English in developing and understanding specific mathematical language;

- opportunities to observe, assess and plan the next stage in children's learning;

- relevant training to improve practitioners' knowledge, skills and understanding. (QCA, P.68)

Knowledge and understanding of the world:

In this area of learning, children are developing the crucial knowledge, skills and understanding that help them to make sense of the world. This forms the foundation for later work in science, design and technology, history, geography, and information and communication technology (ICT).

To give all children the best opportunities for developing effectively their knowledge and understanding of the world, practitioners should give particular attention to:

- activities based on first-hand experiences that encourage exploration, observation, problem solving, prediction, critical thinking, decision

- making and discussion;

- an environment with a wide range of activities indoors and outdoors that stimulate children's interest and curiosity.

- opportunities that help children to become aware of, explore and question issues of differences in gender, ethnicity, language, religion and culture and of special educational needs and disability issues;

- adult support in helping children communicate and record orally and in other ways;

- supplementary experience and information for children with sensory impairment.(QCA,P.82)

Creative development:

Creativity is fundamental to successful learning. Being creative enables children to make connections between one area of learning and another and so extend their understanding. This area of learning includes art, music, dance, role play and imaginative play.

To give all children the best opportunity for effective creative development, practitioners should give particular attention to:

- a stimulating environment in which creativity, originality and expressiveness are valued.

- a wide range of activities that children can respond to by using many senses;

- sufficient time for children to explore, develop ideas and finish working at their ideas;

- opportunities for children to express their ideas through a wide range of types of representation;

- resources from a variety of cultures to stimulate different ways of thinking;

- opportunities to work alongside artists and other creative adults;

- opportunities for children with visual impairment to access and have physical contact with artefacts, materials, spaces and movements;

- opportunities for children with hearing impairment to experience sound through physical contact with instruments and other sources of sound;

- opportunities for children who cannot communicate by voice to respond to music in different ways, such as gestures;

- accommodating children's specific religious or cultural beliefs relating to particular forms of art or methods of representation. (QCA, P. 116)

Communication language and literacy:

Communication, language and literacy depend on learning and being competent in a number of key skills, together with having the confidence, opportunity, encouragement, support and disposition to use them. This area of learning includes communication, speaking and listening in different situations and for different purposes, being read a wide range of books and reading simple texts and writing for a variety of purposes. To give all children the best opportunities for effective development and learning in communication, language and literacy, practitioners should give particular attention to:

- providing opportunities for children to communicate thoughts, ideas and feelings and build up relationships with adults and each other;

- incorporating communication, language and literacy development in planned activities in each area of learning;

- giving opportunities to share and enjoy a wide range of rhymes, music, songs, poetry, stories and non-fiction books;

- giving opportunities for linking language with physical movement in action songs and rhymes, role play and practical experiences such as cookery and gardening;

- planning an environment that reflects the importance of language through signs, notices and books.

- providing opportunities for children to see adults writing and for children to experiment with writing for themselves through making marks, personal writing symbols and conventional script;

- providing time and opportunities to develop spoken language through conversations between children and adults, both one-to-one and in small groups, with particular awareness of, and sensitivity to, the needs of children for whom English is an additional language, using their home language when appropriate.

- planning opportunities for children to become aware of languages and writing systems other than English, and communication systems such as signing and Braille;

- early identification of and response to any particular difficulties in children's language development;

- close teamwork between, where appropriate, bilingual workers, speech therapists and practitioners;

- opportunities for children who use alternative communication systems to develop ways of recording and accessing texts to develop their skills in these methods.((QCA, P. 44)

Personal, social and emotional development:

Successful personal, social and emotional development is critical for very young children in all aspects of their lives and gives them the best opportunity for success in all other areas of learning. It is crucial that settings provide the experiences and support to enable children to develop a positive sense of themselves. To give all children the best opportunities for personal, social and emotional development, practitioners should give particular attention to:

- establishing constructive relationships with children, with other practitioners, between practitioners and children, with parents and with workers from other agencies, that take account of differences and different needs and expectations;

- finding opportunities to give positive encouragement to children, with practitioners acting as positive role models;

- planning opportunities for children to work alone and in small and large groups;

- ensuring that there is time and space for children to focus on activities and experiences and develop their own interests;

- planning activities that promote emotional, moral, spiritual and social development alongside intellectual development;

- planning experiences that help children develop autonomy and the disposition to learn;

- providing positive images in, for example, books and displays that challenge children's thinking and help them to embrace differences

in gender, ethnicity, religion, special educational needs and disabilities;

- providing opportunities for play and learning that acknowledge children's particular religious beliefs and cultural backgrounds;

- planning for the development of independence skills, particularly for children who are highly dependent upon adult support for personal care;

- providing support and a structured approach to achieve the successful social and emotional development of vulnerable children and those with particular behavioural or communication difficulties (QCA ,P. 28)

Physical development:

Physical development in the foundation stage is about improving skills of coordination, control, manipulation and movement. Physical development has two other very important aspects. It helps children gain confidence in what they can do and enables them to feel the positive benefits of being healthy and active. Effective physical development helps children develop a positive sense of well-being.

To give all children the best opportunities for effective physical development, practitioners should give particular attention to:

- planning activities that offer appropriate physical challenges;

- providing sufficient space, indoors and outdoors, to set up relevant activities;

- giving sufficient time for children to use a range of equipment;

- providing resources that can be used in a variety of ways or to support specific skills;

- introducing the language of movement to children, alongside their actions;

- providing time and opportunities for children with physical disabilities or motor impairments to develop their physical skills, working as necessary with physiotherapists and occupational therapists;

- using additional adult help, if necessary, to support individuals and to encourage increased independence in physical activities. (QCA, P.100)

Environment:

For children to have rich and stimulating experiences, the learning environment should be well planned and well organized, it provides the structure for teaching within which children explore, experiment, plan and make decisions for themselves, thus enabling them to learn, develop and make good progress. (QCA, 2000)

The environment that is created in the early years setting should be exciting to children, inspiring in them the eagerness to explore and a zest for learning through the learning environment, and supported by the practitioner, all children can access a broad and balanced curriculum and make progress from their own starting point toward the early learning goals and beyond.

Drake (2002) recommends the following areas of provision to be included:

- Role-play areas
- Construction area
- Mark-making/office area
- Maths area
- Water area
- Sand area
- Workshop area
- Malleable materials area (clay, dough, etc)
- Music area (making and listening to music)
- Painting area
- Book corner
- IT area

(Planning Children's Play and Learning in the Foundation stage by Jane Darke2002 page3)

- The Early Childhood Environment Rating Scale–Revised (ECERS-R) lists the following facilities for inclusion:
- Indoor space
- Furniture for routine care, play and learning
- Furnishings for relaxation and comfort

- Room arrangement for play
- Space for privacy
- Child-related display
- Space for gross motor play
- Gross motor equipment

Planning an area of provision should start with the question: what opportunities for learning do we want to offer children? In all areas of provision, there should be planned opportunities for:

- Practicing and refining skills
- Acquiring knowledge and developing concepts and for consolidation
- Developing positive attitudes to learning

4.2.6 Rationale for parents' involvement in preschool education :

"I wish to stress that parents cannot be disinterested in the education of their children, but it is necessary that they become even more aware that the school does not exempt them from their mission, but aids them in fulfilling it; and that they are the first educators of their children. Therefore, the harmonious collaboration between family and school is indispensable: Both united in the impassioned task of forming men and women."

Pope John Paul II, 1983

There has been a particular emphasis on the role of parents in preschool education in recent years and education policy has aligned with this trend. For example, the Education Act of 1981 in the UK supported parental involvement in children's education in partnership with schools and in the US, the American National Commission for Excellence in Education (1983) stated that the parents are a child's first and most influential teachers, and were to participate in children's education, fostering their inquisitiveness, creativity and encouraging their achievement (Wallace & Walberg, 1991).

However, present studies realize that parental involvement is not a simple activity, and it is a complex and multidimensional conception. As such, it must be classified into specific types of involvement and analysed on different learning stages (Georgious, 1999).

Because most children do not start formal learning until the age of six, parents play a leading role in a child's development at this stage.

Much research has suggested that parental involvement on the earliest stage of formal learning has a positive influence on a child's future achievement which highlights the important impaction of parents for beginners. 'Partners' would be a suitable word to describe the parents at this stage because they are in closed involved with their child's education.

When families are involved in their children's early childhood education, children may experience greater success once they enter elementary school (Miedel & Reynolds, 1999).

Educational involvement of families can be defined as activities that parents conduct at home and in early childhood settings to directly or

indirectly support their children's learning. These activities can be conducted individually or through parent peer networks.

Research suggests that family involvement in education can boost young children's academic success (e.g., Henderson & Berla, 1994; Izzo, Weissbert, Kasprow & Fendrich, 1999; Marcon, 1999;). Research also suggests that the transition between early childhood and elementary school can be a crucial period in children's development (Pianta, Rimm-Kauffman & Cox, 1999).

Compared to non-preschool parents, parents of children who participated in preschool activities had higher occupational aspirations for their children, more satisfaction with their children's school performance, and greater parent involvement in elementary years at home and in school. Preschool factors positively affecting later home and school involvement include the existence, amount, and number of years of preschool, as well as follow-on activities once children reach school age (Barnard, 2001).

Chapter two gave a detailed description of the development of education and the emergence of preschool education in Qatar. it also provided the rationale of early childhood education, preschool curriculum, evaluation, study domains and parents' involvement. Chapter three provides an overview of the major theories that have contributed to the general knowledge of early childhood education. In addition, an overview of the most prominent preschool curriculum are provided and discussed.

3- CHAPTER THREE

LEARNING THEORIES AND PRESCHOOL CURRICULUM MODELS

The purpose of chapter three is to provide an overview of the major theories that have contributed to the general knowledge of early childhood education and underpinned the experiential curriculum that is fundamental to the Qatari preschool curriculum. The behaviorist, cognitive and constructive theories are presented and discussed. In addition, an overview of the most prominent preschool curriculum are provided and discussed. These include Waldorf, Montessori, Reggio Emilia, the High Scope, and the Project Approach.

3.1. Learning Theories

The purpose of this study is to investigate the nature and quality of preschool education in Qatar. Most of the curricula used in these preschools are theory based. When designing or evaluating a preschool curriculum, an understanding and incorporation of learning theory is needed because it adds focus and direction to the process. Instructional designers should address the needs and characteristics of the specific population of children, the skills and experience of the teachers, and the broader community and school context in order to best incorporate learning theory within their programs. Understanding the learning theories has been very helpful for the researcher in both formulating the study hypotheses and deciding the methodology and research methods deployed in this study.

The Qatar early years curriculum focuses on experiential learning. What does this mean? Indeed what is learning? According to the Webster's New World Dictionary, learning is defined as "the acquiring of knowledge or skill" (Neufeldt & Guralnik, 1994, p.769). Based on the aforementioned definition, how does a child acquire knowledge or skill?

To answer this question, this chapter takes a brief look at the major theories that have contributed to the current knowledge base of early childhood development and learning; the most famous theorists associated with each theory and discuss their implications for instructional design. Until the 20th century, little scientific attention was given to studying how children grow and develop. In the past 90 years, however, research has provided a great deal of information about childhood as a separate and distinct stage of life with its own characteristics.

The three basic theories of learning that will be discussed in this chapter are behaviourism, cognitivism and constructivism. As we will see these theories are not stagnant. They are evolving and changing as we discover new ways of viewing human recognition

3.1.1 Behaviourism:

Behaviourism emerged in the early part of the 20th century in part a reaction against the introspective investigative methods of people like Wundt and Freud. It emphasised empirical work based around observable behaviours and their stimuli. Some key behavioural scientists in the development of the behaviourist theory were Pavlov (1849-1936), Watson (1878-1958), Thorndike (1874-1949) and Skinner (1904 -1990).

The theory of behaviourism concentrates on the study of overt behaviours that can be observed and measured (Good & Brophy, 1990). It views the mind as a "black box" in the sense that response to stimulus can be observed quantitatively, totally ignoring the possibility of thought processes occurring in the mind.

The basic stimulus/ response model within a learning context has a teacher providing a stimulus such as asking a question, and a student giving a response. Depending upon the accuracy of the response the student would then receive the appropriate reward or punishment, praise or an admonishment. The teacher is able to direct the process by reinforcing correct or approved responses whilst discourages "wrong answers".

Although this seems almost ludicrously simplistic, it can be seen that the stimulus/ response mechanism remains a fundamental element of our behaviour: I am stimulated by hunger so I go to the fridge; I am reinforced by the diminution of the hunger pangs and the pleasure of food. Similarly, I might be stimulated by the need for a better job, so my response is to do an evening course in ICT. I am reinforced by the satisfaction of passing the course and, hopefully, acquiring a fatter pay packet. Simple stimulus/ response relationships may generate complex behaviour. Table 3.1 shows the stimulus and response items of pavlov's experiment. The Russian physiologist is best known for his work in classical conditioning or stimulus substitution. Pavlov's most famous experiment involved food, a dog and a bell.

Pavlov's Experiment

- Before conditioning, ringing the bell caused no response from the dog. Placing food in front of the dog initiated salivation.

- During conditioning, the bell was rung a few seconds before the dog was presented with food.

- After conditioning, the ringing of the bell alone produced salivation. (Dembo, 1994).

Table 3.1

Stimulus and Response Items of Pavlov's Experiment

Food	Unconditioned Stimulus
Salivation	Unconditioned Response (natural, not learned)
Bell	Conditioned Stimulus
Salivation	Conditioned Response (to bell)

3.1.1.1 Behaviourism and Instructional Design

In Paul Saettler's book The History of American Educational Technology, he states that behaviourism did not have an impact on educational technology until the 1960s, which was the time that behaviourism actually began to decrease in popularity in American psychology. Saettler identified six areas that demonstrate the impact of behaviourism on Educational Technology in America: the behavioural

Objectives movement; the teaching machine phase; the programmed instruction movement; individualized instructional approaches, computer assisted learning and the systems approach to instruction.

Behavioural Objectives Movement:

A behavioural objective states learning objectives in "specified, quantifiable, terminal behaviours" (Saettler, pp. 288, 1990). Behavioural objectives can be summed up using the mnemonic device ABCD

Example: After having completed the unit the student will be able to answer correctly 90% of the questions on the posttest.

- A - Audience - the student
- B - Behaviour - answer correctly
- C - Condition - after having completed the unit, on a post test
- D - Degree - 90% correct

To develop behavioural objectives a learning task must be broken down through analysis into specific measurable tasks. The learning success may be measured by tests developed to measure each objective.

Taxonomic Analysis of Learning Behaviours:

- **Bloom's Taxonomy of Learning** - In 1956 Bloom and his colleagues began development of a taxonomy in the cognitive, attitudinal (affective) and psychomotor domains. Many people are familiar with Bloom's Cognitive taxonomy, which has six levels: knowledge, comprehension, application, analysis, synthesis and evaluation

- **Gagne's Taxonomy of Learning** - Robert Gagne developed his taxonomy of learning in 1972. Gagne's taxonomy was comprised of five categories: verbal information, intellectual skill, cognitive strategy, attitude and motor skill.

Mastery Learning:

Mastery learning was originally developed by Morrison in the 1930s. His formula for mastery was "*Pretest, teach, test the result, adapt procedure, teach and test again to the point of actual learning.*" (Saettler, 1990). Mastery learning assumes that all students can master the materials presented in the lesson. Bloom further developed Morrison's plan, but mastery learning is more effective for the lower levels of learning on Bloom's taxonomy, and not appropriate for higher level learning (Saettler, 1990).

Accountability Movement

A movement known as scientific management of industry arose in the early 1900s in response to political and economic factors of that time. Franklin Bobbitt proposed utilization of this system in education stressing that the standards and direction of education should stem from the society. Bobbitt's ideas exemplified the idea of accountability, competency-based education and performance-based education, which because of similar economic and political factors, experienced a revival in America during the late 1960s and 1970s (Saettler, 1990).

Teaching Machines and Programmed Instruction Movement:

Although the elder Sophists, Comenius, Herbart and Montessori used the concept of programmed instruction in their repertoire, B.F.

Skinner is the most current and probably best known advocate of teaching machines and programmed learning. Contributors to this movement include the following:

- Pressey - introduced a multiple-choice machine at the 1925 American Psychological Association meeting.

- Peterson - a former student of Pressey's who developed "chemo sheets" in which the learner checked their answers with a chemical-dipped swab.

- The military in W.W.II devises called "phase checks", constructed in the 1940s and 1950s, taught and tested such skills and disassembly-assembly of equipment.

- Crowder-designed a branched style of programming for the US Air force in the 1950s to train troubleshooters to find malfunctions in electronic equipment.

- Skinner - based on operant conditioning Skinner's teaching machine required the learner to complete or answer a question and then receive feedback on the correctness of the response. Skinner demonstrated his machine in 1954 (Saettler, 1990).

Individualized Approaches to Instruction

Similar to programmed learning and teaching machines individualized instruction began in the early 1900s, and was revived in the 1960s. The Keller Plan, Individually Prescribed Instruction, Program for Learning in Accordance with Needs, and Individually Guided Education are all examples of individualized instruction in the U.S. (Saettler, 1990).

Keller Plan (1963)

Keller Plan was developed by F.S. Keller, a colleague of Skinner, the Keller plan was used for university college classes. The main features of Keller Plan were:

- Individually paced.
- Mastery learning.
- Lectures and demonstrations motivational rather than critical information.
- Use of proctors which permitted testing, immediate scoring, tutoring, personal-social aspect of educational process (Saettler, 1990).

Individually Prescribed Instruction (IPI) (1964)

The IPA was developed by the Learning Research and Development Centre of the University of Pittsburgh. It lasted into the 1970s when it lost funding and its use dwindled. Its main features were:

- Prepared units.
- Behavioural objectives.
- Planned instructional sequences.
- Used for reading, math and science.
- Included pre-test and post-test for each unit.

- Materials continually evaluated and upgraded to meet behavioural objectives (Saettler, 1990).

Computer-Assisted Instruction (CAI)

Computer-assisted instruction was first used in education and training during the 1950s. Early work was done by IBM and such people as Gordon Pask, and O.M. Moore, but CAI grew rapidly in the 1960s when federal funding for research and development in education and industrial laboratories was implemented. The U.S. government wanted to determine the possible effectiveness of computer-assisted instruction, so they developed two competing companies, (Control Data Corporation and Mitre Corporation) who came up with the PLATO and TICCIT projects. Despite money and research, by the mid seventies it was apparent that CAI was not going to be the success that people had believed. Some of the reasons were that CAI had been oversold and could not deliver, there was a lack of support from certain sectors and there were technical problems in implementation. Also the lack of quality software and its high cost inhibited its use.

Computer-assisted instruction was very much drill-and-practice - controlled by the program developer rather than the learner. Little branching of instruction was implemented although TICCIT did allow the learner to determine the sequence of instruction or to skip certain topics (Saettler, 1990).

Systems Approach to Instruction

The systems approach developed out of the 1950s and 1960s focus on language laboratories, teaching machines, programmed instruction, multimedia presentations and the use of the computer in

instruction. Most systems approaches are similar to computer flow charts with steps that the designer moves through during the development of instruction. Rooted in the military and business world, the systems approach involved setting goals and objectives, analyzing resources, devising a plan of action and continuous evaluation/modification of the program (Saettler, 1990).

3.1.1.2 Criticisms of Behaviourism

There have been many criticisms of behaviourism, including the following:

1. Behaviourism does not account for all kinds of learning, since it disregards the activities of the mind.

2. Behaviourism does not explain some learning--such as the recognition of new language patterns by young children--for which there is no reinforcement mechanism.

3. Research has shown that animals adapt their reinforced patterns to new information. For instance, a rat can shift its behaviour to respond to changes in the layout of a maze it had previously mastered through reinforcements.

In Behaviourism, the child is akin to a blank slate waiting and receptive to whatever the environment might write on it. There is a primary importance to the influence of the environment on young children's learning. This includes the teacher, both as controller of the environment and as a part of the environment itself. Behaviourism leads

to a teaching model which includes direct instruction with a carefully sequenced set of prescribed goals, objectives and materials.

3.1.2 Cognitivism

In the 1920's people began to find limitations in the behaviourist approach to understanding learning.

Behaviourists were unable to explain certain social behaviours. For example, children do not imitate all behaviour that has been reinforced. Furthermore, they may model new behaviour days or weeks after their first initial observation without having been reinforced for the behaviour. Because of these observations, Bandura and Walters departed from the traditional operant conditioning explanation that the child must perform and receive reinforcement before being able to learn. They stated in their 1963 book, Social Learning and Personality Development, that an individual could model behaviour by observing the behaviour of another person. This theory leads to Bandura's Social Cognitive Theory (Dembo, 1994).

What is Cognitivism?

"Cognitive theorists recognize that much learning involves associations established through contiguity and repetition. They also acknowledge the importance of reinforcement, although they stress its role in providing feedback about the correctness of responses over its role as a motivator. However, even while accepting such behaviouristic concepts, cognitive theorists view

learning as involving the acquisition or reorganization of the cognitive structures through which humans process and store information." (Good & Brophy, 1990, p. 187)

The cognitive revolution became evident in American psychology during the 1950's (Saettler, 1990). One of the major players in the development of cognitivism is Jean Piaget, who developed the major aspects of his theory as early as the 1920's. Piaget's ideas did not have impact in North America until the 1960's after Miller and Bruner founded the Harvard Centre for Cognitive studies.

Some prominent cognitivists in the development of the cognitive theory are Tolman, Bruner, Ausubel, Piaget, Bandura and Vygotsky.

Edward Tolman, an early American psychologist who published Cognitive Maps in Rats and Men in 1948, proposed five types of learning: (1) approach learning, (2) escape learning, (3) avoidance learning, (4) choice-point learning, and (5) latent learning. All forms of learning depend upon means-end readiness, i.e., goal-oriented behaviour, mediated by expectations, perceptions, representations, and other internal or environmental variables. The major Principles of Tolman's theory were

1. Learning is always purposive and goal-directed.

2. Learning often involves the use of environmental factors to achieve a goal (e.g., means-ends-analysis)

3. Organisms will select the shortest or easiest path to achieve a goal.

Jerome S. Bruner, a leading representative of the Cognitivist School of learning, stressed the element of social interaction as an

integral part of information processing first espoused interactional cognitive development theories. He developed the discovery theory of learning which he defined as obtaining knowledge for oneself by the use of one's own mind (Bruner, 1960). Bruner contended that a true act of discovery is not a random event. It involves an expectation of finding regularities and relationships in the environment. He endorsed problem solving with structured searching strategies is an integral part of discovery learning.

A major theme in the theoretical framework of Bruner is that learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge. The learner selects and transforms information, constructs hypotheses, and makes decisions, relying on a cognitive structure to do so. Cognitive structure (i.e., schema, mental models) provides meaning and organization to experiences and allows the individual to "go beyond the information given".

As far as instruction is concerned, the instructor should try and encourage students to discover principles by themselves. The instructor and student should engage in an active dialog (i.e., Socratic learning). The task of the instructor is to translate information to be learned into a format appropriate to the learner's current state of understanding. Curriculum should be organized in a spiral manner so that the student continually builds upon what they have already learned.

Bruner (1966) states that a theory of instruction should address four major aspects: (1) predisposition towards learning, (2) the ways in which a body of knowledge can be structured so that it can be most readily grasped by the learner, (3) the most effective sequences in which

to present material, and (4) the nature and pacing of rewards and punishments. Good methods for structuring knowledge should result in simplification, generation of new propositions, and increased manipulation of information.

In his more recent work, Bruner (1990) has expanded his theoretical framework to encompass the social and cultural aspects of learning. The basic Principles of Bruner's theory were:

1. Instruction must be concerned with the experiences and contexts that make the student willing and able to learn (readiness).

2. Instruction must be structured so that it can be easily grasped by the student (spiral organization).

3. Instruction should be designed to facilitate extrapolation and or fill in the gaps (going beyond the information given).

David Ausubel who was influenced by Piaget's cognitive development theory, was very active in his field in the 1950's to 1970's. He developed his instructional models based on cognitive structures. His contributions to the psychology of learning have gained both praise and criticism from educational psychologists and educators alike. His emphasis on meaningful learning may not be controversial, but the fact that he believes receptive learning can be just as meaningful as discovery has gained more attention and more criticism.

Ausubel's theory is involved with how individuals learn large amounts of "meaningful" material from verbal/textual lessons in school. This is in contrast to theories developed in the laboratory.

In Ausubel's subsumption theory, he contended that "the most important single factor influencing learning is what the learner already knows." (Ausubel, 1968) A primary process in learning is subsumption in which new material is related to relevant ideas in the existing cognitive structures. A major instructional mode proposed by Ausubel is the use of advance organizers. He emphasizes that advance organizers are different from overviews and summaries which simply emphasize key ideas and details in an arbitrary manner. Organizers act as a "subsuming bridge" (Ausubel, 1963) between new learning material and existing related ideas.

Ausubel specifies that his theory applies only to reception (expository) learning in school settings. He states that there are differences between reception learning and rote and discovery learning. Rote learning does not involve subsumption (i.e., meaningful materials) and in discovery learning the learner must discover information through problem solving. The basic Principles of Ausubel's theory were:

1. The most general ideas of a subject should be presented first and then progressively differentiated in terms of detail and specifics.

2. Instructional materials should attempt to integrate new material with previously presented information through comparisons and cross-referencing of new and old ideas.

Albert Bandura has done a great deal of work on social learning throughout his career and is famous for his "Social Learning Theory" which he has recently renamed, "Social Cognitive Theory". Bandura is seen by many as a cognitive psychologist because of his focus on

motivational factors and self-regulatory mechanisms that contribute to a person's behaviour, rather than just environmental factors. This focus on cognition is what differentiates social cognitive

Social learning theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, an environmental influences. The component processes underlying observational learning are:

(1) Attention, including modelled events (distinctiveness, affective valence, complexity, prevalence, functional value) and observer characteristics (sensory capacities, arousal level, perceptual set, past reinforcement),

(2) Retention, including symbolic coding, cognitive organization, symbolic rehearsal, motor rehearsal)

(3) Motor Reproduction, including physical capabilities, self-observation of reproduction, accuracy of feedback.

(4) Motivation, including external, vicarious and self reinforcement.

Social learning theory has been applied extensively to the understanding of aggression and psychological disorders, particularly in the context of behaviour modification It is also the theoretical foundation for the technique of behaviour modelling which is widely used in training programs. In recent years, Bandura has focused his work on the concept of self-efficacy in a variety of contexts (e.g., Bandura, 1997). The basic Principles of Bandura's theory were:

1. The highest level of observational learning is achieved by first organizing and rehearsing the modelled behaviour symbolically and

then enacting it overtly. Coding modelled behaviour into words, labels or images results in better retention than simply observing.

2. Individuals are more likely to adopt a modelled behaviour if it results in outcomes they value.

3. Individuals are more likely to adopt a modelled behaviour if the model is similar to the observer and has admired status and the behaviour has functional value.

3.1.2.1 Key Concepts of the Cognitive Theory

Schema - An internal knowledge structure. New information is compared to existing cognitive structures called "schema". Schema may be combined, extended or altered to accommodate new information.

Three-Stage Information Processing Model - input first enters a sensory register, then is processed in short-term memory, and then is transferred to long-term memory for storage and retrieval.

- Sensory Register - receives input from senses which lasts from less than a second to four seconds and then disappears through decay or replacement. Much of the information never reaches short term memory but all information is monitored at some level and acted upon if necessary.

- Short-Term Memory (STM) - sensory input that is important or interesting is transferred from the sensory register to the STM. Memory can be retained here for up to 20 seconds or more if rehearsed repeatedly. Short-term

memory can hold up to 7 plus or minus 2 items. STM capacity can be increased if material is chunked into meaningful parts.

- Long-Term Memory and Storage (LTM) - stores information from STM for long term use. Long-term memory has unlimited capacity. Some materials are "forced" into LTM by rote memorization and over learning. Deeper levels of processing such as generating linkages between old and new information- constructing understanding- are much better for successful retention of material.

Meaningful Effects - Meaningful information is easier to learn and remember. (Good and Brophy, 1990) If a learner links relatively meaningless information with prior schema it will be easier to retain. (Good and Brophy, 1990)

Serial Position Effects - It is easier to remember items from the beginning or end of a list rather than those in the middle of the list, unless that item is distinctly different.

Practice Effects - Practicing or rehearsing improves retention especially when it is distributed practice. By distributing practices the learner associates the material with many different contexts rather than the one context afforded by mass practice.

Transfer Effects- The effects of prior learning on learning new tasks or material.

Interference Effects - Occurs when prior learning interferes with the learning of new material.

Organization Effects - When a learner categorizes input such as a grocery list, it is easier to remember.

Levels of Processing Effects - Words may be processed at a low-level sensory analysis of their physical characteristics to high-level semantic analysis of their meaning. (Good and Brophy, 1990) The more deeply a word is process the easier it will be to remember.

State Dependent Effects - If learning takes place within a certain context it will be easier to remember within that context rather than in a new context.

Mnemonic Effects - Mnemonics are strategies used by learners to organize relatively meaningless input into more meaningful images or semantic contexts. For example, the notes of a musical scale can be remembered by the rhyme: Every Good Boy Deserves Fruit.

Schema Effects - If information does not fit a person's schema it may be more difficult for them to remember and what they remember or how they conceive of it may also be affected by their prior schema.

Advance Organizers – Ausebel's advance organizers prepare the learner for the material they are about to learn. They are not simply outlines of the material, but are material that will enable the student to make sense out of the lesson.

3.1.2.2 Cognitivism and Instructional Design

Although cognitive psychology emerged in the late 1950s and began to take over as the dominant theory of learning, it was not until the late 1970s that cognitive science began to have influence on instructional design. Cognitive science began a shift from behaviouristic practices which emphasised external behaviour, to a concern with the internal mental processes of the mind and how they could be utilized in promoting effective learning. The design models that had been developed in the behaviourist tradition were not simply tossed out, but instead the "task analysis" and "learner analysis" parts of the models were embellished. The new models addressed component processes of learning such as knowledge coding and representation, information storage and retrieval as well as the incorporation and integration of new knowledge with previous information (Saettler, 1990). Because Cognitivism and Behaviourism are both governed by an objective view of the nature of knowledge and what it means to know something, the transition from behavioural instructional design principles to those of a cognitive style was not entirely difficult. The goal of instruction remained the communication or transfer of knowledge to learners in the most efficient, effective manner possible (Bednar et al., in Anglin, 1995). For example, the breaking down of a task into small steps works for a behaviourist who is trying to find the most efficient method of shaping a learner's behaviour. The cognitive scientist would analyze a task, break it down into smaller steps or chunks and use that information to develop instruction that moves from simple to complex building on prior learning.

The influence of cognitive science in instructional design is evidenced by the use of advance organizers, mnemonic devices,

metaphors, chunking into meaningful parts and the careful organization of instructional materials from simple to complex.

Cognitivism and Computer-Based Instruction

Computers process information in a similar fashion to how cognitive scientists believe humans process information: receive, store and retrieve. This analogy makes the possibility of programming a computer to "think" like a person conceivable, i.e.. artificial intelligence.

Artificial intelligence involves the computer working to supply appropriate responses to student input from the computer's data base. A trouble-shooting programs is one example of these programs. Table 3.2 shows some programs and their intended use.

Table 3.2

Some computer programs and their intended use

Programme	Intended use
SCHOLAR	teaches facts about South American geography in a Socratic method
PUFF	diagnoses medical patients for possible pulmonary disorders
MYCIN	diagnoses blood infections and prescribes possible treatment
DENDRAL	enables a chemist to make an accurate guess about the molecular structure of an unknown compound
GUIDION	a derivative of the MYCIN program that gave a student information about a case and compared their

	diagnosis with what MYCIN would suggest
META-DENDRAL	**makes up its own molecular fragmentation rules in an attempt to explain sets of basic data**
SOPIE	**helps engineers troubleshoot electronic t problems**
BUGGY	**allows teachers to diagnose mathematical errors**
LOGO	**helps children learn to program a computer**
PLATO	**encourage mathematical development through Discovery (Saettler, 1990).**

3.1.3 Constructivism

Constructivism, which is a branch of cognitivism, is a learning theory based on the idea that each individual learner constructs his or her own knowledge. Constructivism has roots in both philosophy and psychology. "The essential core of constructivism is that learners actively construct their own knowledge and meaning from their experiences This core has roots that extend back through many years and many philosophers, including Dewey, Hegel, Kant and Vico. Philosophically, this essence relies on an epistemology that stresses subjectivism and relativism, the concept that while reality may exist separate from experience, it can only be known through experience, resulting in a personally unique reality". (Fosnot, 1996).

3.1.3.1 Instructional principles of Constructivism

Constructivist learning has eight instructional principles that should be incorporated in an overall framework of a curriculum (Savery 1995). These principles as defined by Savery are:

1. **Anchor all learning activities to a larger task or problem .** Learning must have a purpose, and that purpose must be clear to the learner .

2. **Support the learner in developing ownership for the overall problem or task.** Savery mentions that far too often the goal is to simply pass the test and learners do not accept the goal of the instructional program.

3. **Design an authentic task.** An authentic learning environment is one in which the cognitive demands . . . are consistent with the cognitive demands of the environment for which we are preparing the learner"(p. 33)

4. **Design the task and the learning environment to reflect the complexity of the real world environment** .The learning environment should not simplified, rather the principles of cognitive apprenticeship should be applied to support the learner in a realistic complex environment.

5. **Give the learner ownership of the process used to develop a solution** .Learners must own the problem solving process, they must have responsibility for all of the various tasks required to produce multimedia. "Frequently, teachers will give students ownership of the problem, but dictate the process for working on that problem." (p. 33)

6. **Design the learning environment to support and challenge the learner's thinking** .Even though the learner has ownership of the problem, this does not mean that just any activity or solution is appropriate. The learner needs to be trained to think and problem

solve in an appropriate manner for the environment being simulated.

7. **Encourage testing ideas against alternative views and contexts .** Since knowledge is a socially negotiated construction, "the quality of one's understanding can be only determined in a social environment where we can see if our understanding can accommodate the issues and views of others and to see if there are points of view which we could usefully incorporate into our understanding" (p. 34).

8. **Provide opportunity for and support reflection on both the content learned and the learning process.** Self regulatory and self reflection skills need to become independent of the instructor. (Savery 1995)

Constructivism's foundational scholars are Jean Piaget, Lev S. Vygotsky and John Dewey

Jean Piaget a Swiss psychologist, who focused on cognitive development, began a research program during the 1920s that has had the greatest impact on contemporary theories of cognitive development than that of any other single researcher.

Piaget's interest in cognitive development came from his training in the natural sciences and his interest in epistemology. He was very interested in knowledge and how children come to know their world. He developed his cognitive theory by actually observing children. Using a standard question or set of questions as a starting point, he followed the child's train of thought and allowed the questioning to be flexible. Piaget believed that children's spontaneous comments provided valuable clues to

understanding their thinking. He was not interested in a right or wrong answer, but rather what forms of logic and reasoning the child used (Singer, 1978).

After many years of observation, Piaget concluded that intellectual development is the result of the interaction of hereditary and environmental factors. As the child develops and constantly interacts with the world around him, knowledge is invented and reinvented. His theory of intellectual development is strongly grounded in the biological sciences. He saw cognitive growth as an extension of biological growth and as being governed by the same laws and principles (London, 1988).

He argued that intellectual development controlled every other aspect of development - emotional, social, and moral.

Piaget may be best known for his stages of development. Piaget suggested that children think and reason differently at different periods in their lives. He believed that everyone passed through an invariant sequence of four qualitatively distinct stages. Invariant means that a person cannot skip stages or reorder them. Although every normal child passes through the stages in exactly the same order, there is some variability in the ages at which children attain each stage. The four stages are:

1. The Sensorimotor Period (birth to 2 years)

During this time, Piaget said that a child's cognitive system is limited to motor reflexes at birth, but the child builds on these reflexes to develop more sophisticated procedures. They learn to generalize their activities to a wider range of situations and coordinate them into increasingly lengthy chains of behaviour.

2. Preoperational Thought (2 to 6/7 years)

At this age, according to Piaget, children acquire representational skills in the areas mental imagery, and especially language. They are very self-oriented, and have an egocentric view; that is, preoperational children can use these representational skills only to view the world from their own perspective.

3. Concrete Operations (6/7 to 11/12 years)

As opposed to Preoperational children, children in the concrete operations stage are able to take another's point of view and take into account more than one perspective simultaneously. They can also represent transformations as well as static situations. Although they can understand concrete problems, Piaget would argue that they cannot yet perform on abstract problems, and that they do not consider all of the logically possible outcomes.

4. Formal Operations (11/12 to adult)

Children who attain the formal operation stage are capable of thinking logically and abstractly. They can also reason theoretically. Piaget considered this the ultimate stage of development, and stated that although the children would still have to revise their knowledge base, their way of thinking was as powerful as it would get. (Evans, 1973).

A central component of Piaget's developmental theory of learning and thinking is that both involve the participation of the learner. Knowledge is not merely transmitted verbally but must be constructed and reconstructed by the learner. Piaget asserted that for a child to know

and construct knowledge of the world, the child must act on objects and it is this action which provides knowledge of those objects (Sigel, 1977); the mind organizes reality and acts upon it. The learner must be active; he is not a vessel to be filled with facts. Piaget's approach to learning is a readiness approach. Readiness approaches in developmental psychology emphasize that children cannot learn something until maturation gives them certain prerequisites (Brainerd, 1978). The ability to learn any cognitive content is always related to their stage of intellectual development. Children who are at a certain stage cannot be taught the concepts of a higher stage. Hence, this imposes a logical progression on the targets or objectives for learning in the early years.

Intellectual growth involves three .fundamental processes: assimilation, accommodation, and equilibration. Assimilation involves the incorporation of new events into preexisting cognitive structures. Accommodation means existing structures change to accommodate to the new information. This dual process, assimilation-accommodation, enables the child to form schema. Equilibration involves the person striking a balance between himself and the environment, between assimilation and accomodation. When a child experiences a new event, disequilibrium sets in until he is able to assimilate and accommodate the new information and thus attain equilibrium. There are many types of equilibrium between assimilation and accommodation that vary with the levels of development and the problems to be solved. For Piaget, equilibration is the major factor in explaining why some children advance more quickly in the development of logical intelligence than do others (Lavatelli, 1973).

Lev Vygotsky, a Russian psychologist, was interested in applying Marxist social theory to individual psychology. The approach he takes to cognitive development is socio-cultural, working on the assumption that 'action is mediated and cannot be separated from the milieu in which it is carried out' (Wertsch, 1991:18)

Vygotsky is responsible for the social development theory of learning. He proposed that social interaction profoundly influences cognitive development. Central to Vygotsky's theory is his belief that biological and cultural development do not occur in isolation (Driscoll, 1994).

Vygotsky approached development differently from Piaget. Piaget believed that cognitive development consists of four main periods of cognitive growth: sensorimotor, preoperational, concrete operations, and formal operations (Saettler, 331). Piaget's theory suggests that development has an end point in goal. Vygotsky, in contrast, believed that development is a process that should be analyzed, instead of a product to be obtained. According to Vygotsky, the development process that begins at birth and continues until death is too complex to be defined by stages (Driscoll, 1994).

Vygotsky believed that this life long process of development was dependent on social interaction and that social learning actually leads to cognitive development. This phenomena is called the Zone of Proximal Development . Vygotsky describes it as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978). In other words, a student can perform a task under

adult guidance or with peer collaboration that could not be achieved alone. The Zone of Proximal Development bridges that gap between what is known and what can be known. Vygotsky claimed that learning occurred in this zone.

Therefore, Vygotsky focused on the connections between people and the cultural context in which they act and interact in shared experiences (Crawford, 1996). According to Vygotsky, humans use tools that develop from a culture, such as speech and writing, to mediate their social environments. Initially children develop these tools to serve solely as social functions, ways to communicate needs. Vygotsky believed that the internalization of these tools led to higher thinking skills. When Piaget observed young children participating in egocentric speech in their preoperational stage, he believed it was a phase that disappeared once the child reached the stage of concrete operations. In contrast, Vygotsky viewed this egocentric speech as a transition from social speech to internalized thoughts (Driscoll, 1994). Thus, Vygotsky believed that thought and language could not exist without each other.

Traditionally, schools have not promoted environments in which the students play an active role in their own education as well as their peers'. Vygotsky's theory, however, requires the teacher and students to play untraditional roles as they collaborate with each other. Instead of a teacher dictating her meaning to students for future recitation, a teacher should collaborate with her students in order to create meaning in ways that students can make their own (Hausfather, 1996). Learning becomes a reciprocal experience for the students and teacher.

The physical classroom, based on Vygotsky's theory, would provide clustered desks or tables and work space for peer instruction,

collaboration, and small group instruction. Like the environment, the instructional design of material to be learned would be structured to promote and encourage student interaction and collaboration. Thus the classroom becomes a community of learning.

Because Vygotsky asserts that cognitive change occurs within the zone of proximal development, instruction would be designed to reach a developmental level that is just above the student's current developmental level. Vygotsky proclaims, "learning which is oriented toward developmental levels that have already been reached is ineffective from the view point of the child's overall development. It does not aim for a new stage of the developmental process but rather lags behind this process" (Vygotsky, 1978).

Appropriation is necessary for cognitive development within the zone of proximal development. Individuals participating in peer collaboration or guided teacher instruction must share the same focus in order to access the zone of proximal development. "Joint attention and shared problem solving is needed to create a process of cognitive, social, and emotional interchange" (Hausfather, 1996). Furthermore, it is essential that the partners be on different developmental levels and the higher level partner be aware of the lower's level. If this does not occur, or if one partner dominates, the interaction is less successful (Driscoll, 1994; Hausfather, 1996).

John Dewey, an American philosopher and educator whose writings and teachings have had profound influences on education, focused on learning-by-doing rather than rote learning and dogmatic instruction, the current practice of his day.

John Dewey's philosophical view throughout his career was that the "theory of inquiry" was how species survived in their environment. Dewey believed in Charles Darwin's theory of nature selection, adopting the naturalistic approach of Darwin. He thought that a living organism interacting with the environment responds by developing an understanding of how to adapt to that situation and excel.

One of Dewey's most outstanding essays was the "Reflex Arc Concept in Psychology" in 1869. In this paper he treated the stimulus separate from the response. This would be later known as social behaviourism. The reflex arc combines the sensory stimulus, central connection, and the motor response as working together as one. He claimed that a person had to experience a set of circumstances and the reflex arc works simultaneously. A person focus on something, then decides what to do, and the acts on the decision. Dewey argued that how we acted in the environment is how we learn (The Internet Encyclopaedia, 2002).

Dewey put to use some of his ideas of learning in the Dewey School at the University of Chicago. The scientifically tested curriculum was centred on the student. Dewey wanted the students to learn from hands on experience. He designed the school to make a balance between philosophy and natural science. Today we call this approach pragmatism.

Dewey believed that education was a life long process and that philosophy was everyday life. He believed that psychology was the basis for learning and the way to obtain a good education. In the Dewey school the teachers were to present real life problems to the children and then guide the students to solve the problem by providing them with a hands

on activity to learn the solution. The child's decision was to be based on the experience the child had in school (Herbert, & McNergney, 1998).

The History of the University of Chicago Laboratory School's web site gives some of the curriculum that Dewey had for his students (UCLS,2003). The child's home environment should be centred in the school. Cooking and sewing was to be taught at school and be a routine. Reading, writing, and math was to be taught in the daily course of these routines. Building, cooking, and sewing had these schooling components in it and these activities also represented everyday life for the students. The students had to measure things and be able to read to do these things. For an example, if a student was not able to read, it was here how they would be taught to achieve the ability to read. The child would experience school as being in a community. This would help the child learn how to share and communicate with others. Problems would be presented to the child and by trail and error the child would be able to solve the problem. The teacher's responsibility was to be aware of where each child was intellectually and provide appropriate problems for the child to solve. Dewey wrote a book about his findings from the Dewey school called *School and Society*.

Dewey encountered a lot of questions on how well the children learned and if the teacher had any control over the students. He gave lectures overseas in China, Japan, and the Soviet Union on his schooling system. This way of teaching is still being used today. Dewey's theory of a schooling system opened the door for hands on learning though trail and error.

3.1.3.2 Constructivism and Instructional Design

The shift of instructional design from behaviourism to cognitivism was not as dramatic as the move into constructivism appears to be, since behaviourism and cognitivism are both objective in nature. Behaviourism and cognitivism both support the practice of analyzing a task and breaking it down into manageable chunks, establishing objectives, and measuring performance based on those objectives. Constructivism, on the other hand, promotes a more open-ended learning experience where the methods and results of learning are not easily measured and may not be the same for each learner.

While behaviourism and constructivism are very different theoretical perspectives, cognitivism shares some similarities with constructivism. An example of their compatibility is the fact that they share the analogy of comparing the processes of the mind to that of a computer. Consider the following statement by Perkins:

> "...information processing models have spawned the computer model of the mind as an information processor. Constructivism has added that this information processor must be seen as not just shuffling data, but wielding it flexibly during learning -- making hypotheses, testing tentative interpretations, and so on." (Perkins, 1991, p.21 in Schwier, 1998).

Other examples of the link between cognitive theory and constructivism are:

- schema theory (Spiro, et al, 1991, in Schwier, 1998)
- connectionism (Bereiter, 1991, in Schwier, 1998)

- hypermedia (Tolhurst, 1992, in Schwier, 1998)
- multimedia (Dede, 1992, in Schwier, 1998)

Despite these similarities between cognitivism and constructivism, the objective side of cognitivism supported the use of models to be used in the systems approach of instructional design. Constructivism is not compatible with the present systems approach to instructional design, as Jonassen points out:

> "The conundrum that constructivism poses for instructional designers, however, is that if each individual is responsible for knowledge construction, how can we as designers determine and insure a common set of outcomes for leaning, as we have been taught to do?" (Jonasson, [On-line])

In the same article, Jonassen (Jonassen, [On-line]) lists the following implications of constructivism for instructional design:

> "...purposeful knowledge construction may be facilitated by learning environments which:
>
> - Provide multiple representations of reality - avoid oversimplification of instruction by by representing the natural complexity of the world
> - Present authentic tasks - contextualize
> - Provide real-world, case-based learning environments, rather than pre-determined instructional sequences
> - Foster reflective practice

- Enable context- and content-dependent knowledge construction

- Support collaborative construction of knowledge through social negotiation, not competition among learners for recognition

"Although we believe that constructivism is not a prescriptive theory of instruction, it should be possible to provide more explicit guidelines on how to design learning environments that foster constructivist learning" (Jonasson, [On-line]).

Jonassen points out that the difference between constructivist and objectivist, (behavioural and cognitive), instructional design is that objective design has a predetermined outcome and intervenes in the learning process to map a pre-determined concept of reality into the learner's mind, while constructivism maintains that because learning outcomes are not always predictable, instruction should foster, not control, learning. With this in mind, Jonassen looks at the commonalties among constructivist approaches to learning to suggest a "model" for designing constructivist learning environments.

"...a constructivist design process should be concerned with designing environments which support the construction of knowledge, which ..."

- Is Based on Internal Negotiation: a process of articulating mental models, using those models to explain, predict, and infer, and reflecting on their utility (Piaget's accommodation, Norman and Rumelhart's tuning and restructuring)

- Is Based on Social Negotiation: a process of sharing a reality with others using the same or similar processes to those used in internal negotiation

- Is Facilitated by Exploration of Real World Environments and Intervention of New Environments: processes that are regulated by each individual's intentions, needs, and/or expectations

- Results in Mental Models and provides Meaningful, Authentic Contexts for Learning and Using the Constructed Knowledge: should be supported by case-based problems which have been derived from and situated in the real world with all of its uncertainty and complexity and based on authentic realife practice

- Requires an Understanding of its Own Thinking Process and Problem Solving Methods: problems in one context are different from those in other contexts

- Modeled for Learners by Skilled Performers but Not Necessarily Expert Performers

- Requires Collaboration Among Learners and With the Teacher: the teacher is more of a coach or mentor than a purveyor of knowledge

- Provides an Intellectual Toolkit to Facilitate an Internal Negotiation Necessary for Building mental Models. (Jonasson, [On-line])

The technological advances of the 1980s and 1990s have enabled designers to move toward a more constructivist approach to design of instruction. One of the most useful tools for the constructivist designer is hypertext and hypermedia because it allows for a branched design rather than a linear format of instruction. Hyperlinks allow for learner control which is crucial to constructivist learning; however, there is some concerns over the novice learner becoming "lost" in a sea of hypermedia.

To address this concern, Jonassen (Jonnassen, [On-line]) notes that each phase of knowledge acquisition requires different types of learning and that initial knowledge acquisition is perhaps best served by classical instruction with predetermined learning outcomes, sequenced instructional interaction and criterion-referenced evaluation while the more advanced second phase of knowledge acquisition is more suited to a constructivist environment.

If a novice learner is unable to establish an "anchor" in a hypermedia environment they may wander aimlessly through hypermedia becoming completely disoriented. Reigeluth and Chung suggest a prescriptive system which advocates increased learner control. In this method, students have some background knowledge and have been given some instruction in developing their own metacognitive strategies and have some way to return along the path they have taken, should they become "lost". (Davidson, 1998)

Most literature on constructivist design suggests that learners should not simply be let loose in a hypermedia or hypertext environment, but that a mix of old and new (objective and constructive) instruction/learning design be implemented. Davidson's (1998) article, suggesting a criteria for hypermedia learning based on an "exploration of relevant learning theories", is an example of this method.

Having noted the eclectic nature of instructional design, it is only fair to point out that not all theorists advocate a "mix and match" strategy for instructional design. Bednar, Cunningham, Duffy and Perry wrote an article that challenges the eclectic nature if instructional systems design by pointing out that "...abstracting concepts and strategies from the

theoretical position that spawned then strips them of their meaning." (Bednar, Cunningham, Duffy & Perry, 1995)

3.1.4 Comparative analysis of the three theories:

This analysis is carried out using four tables compiled from De Villiers (2002). Table 3.3 reflects the underlying philosophy of each theory and table 3.4 examines the impact of each on the instructional systems design ISD process, showing how the positions differ in producing instruction, designing and developing instructional and learning resources, and in actual instruction. Table 3.5 focuses on the learning processes and table 3.6 summarizes the position of each theory on evaluation and assessment of learning.

Table 3.3 indicates how behaviourism aims for behavioural change, manifested by learners' responsive actions; whereas cognitivists stress cognitive response in the form of mental operations; and constructivism emphasizes the value of personal involvement in contextual and experiential learning.

The impact of each theory on the design of instructional systems is illustrated in table 3.4. It outlines characteristics of the instructional design process, and lists features of ISD products.

Table 3.5 sets the scene for Table 3.6, which describes the learning processes that occur using the various instructional/learning resources

Tables 3.5 and 3.6 investigate actual instruction and learning under the three theories. With regard to the behavioural products/resources/learning events and the instructional/learning experience that occurs from their use, behaviourist instruction is basically

predefined, but in learner-centric constructivist learning, no two presentations of the same course will be identical. Following on Table 3.5, which outlines characteristics of the different learning processes, Table 3.6 summarises evaluation and assessment of learning within the three stances, showing major differences.

Table 3.3 Theories underlying philosophy

Characteristic of the theory	Behaviourism	Cognitivism	Constructivism
Operates on	Overt behaviour	Covert mental operations	Performance of authentic tasks
Implemented by	Instructional intervention	Interaction with internal and external environment Self-regulation	Self regulation
Goal	Behavioural change; Performance	Reorganization of internal knowledge structures	Meaning interpreted from experience
Foundations of the theory and classic models	Skinner: Stimulus-response; Reinforcement-feedback	Newell and Simon: Human information processing	Schön: Reflection-in-action
	Gagné: Different conditions of learning for different learning outcomes	- Sensory perception (STM) - Cognitive reception (WM) - Encoding (LTM) - Retrieval	Lebouw: Intentional learning Values Bruner: - Theoretical framework - Own constructing
	Component display theory (CDT)		Problem-based learning (PBL)
Appropriate domain	Well-defined domains	Subject matter that explicitly incorporates higher-order thinking skills	Ill-defined, real-world situations
Recipients	Students	Learners	Learners
Affective locus	Extrinsic motivation	Fostered motivation (eg. ARCS model)	Intrinsic motivation
World view	Objective, universal reality - to be imparted to learner	Common understanding - to be attained by learner	Personal, subjective interpretation of reality; Social negotiation of meaning - collaborative environment

Table 3.4 Characteristics of the instructional design process

Characteristic of the theory	Behaviourism	Cognitivism	Constructivism
Objectives	Predefined learning objectives	Performance objectives; Integration of multiples objectives	Objectives & negotiated goals emerge across process - not same for each learner
Features of design and development process	Linear sequence of steps; Independent, discrete phases	Linear process, with feedback and revision; Iterated phases	Non-linear, recursive design and development; At times even chaotic
	Design of instruction separate from implementation	More integration; Some strategies selected during instruction	Roles of designers and actual educators converge
	Systematic labour-intensive development methodology	Creativity in design and development	Open system of design and development; Holistic and reflective
Features of ISD products	Reductionist: Component parts Decontextualised skills	Integrative: Parts-into-wholes; Transactions	Holistic: Construction, complexity, and contextual
	Identify objectives; Identify components of performances	Identify objectives; Identify procedures that enable performance	Identify case study Or problem
	Deterministic and replicable	Integrate affective and cognitive issues	Unpredictable and indeterministic
	Pre-planned learning experiences	Pre-planned options	Environments provided with resources and tools; Learners supported.
	Rigid models	Flexibility within the Given framework	Incorporated subversion
	Learning designed to achieve outcomes	Learning designed to result in mental processes	Designed to stress Learning gain
	Instructional strategies appropriate for the kind of learning	Cognitive strategies focusing on developing learners' knowledge structures	Principles, guidelines
Evaluation	Emphasis on summative evaluation	Emphasis on formative evaluation	Formative evaluation by learners and experts
Role players	Expert ID practitioners produce instruction	Professional designers	Participatory, negotiated design, including user-designers and teachers/trainers/instructors
Research approach	Proven strategies; Media comparisons; Empirical analysis; Research-based	Cognitive science Information processing theory	Qualitative, real-world effects; Subjective analysis

Table 3.5 Actual instruction and learning: The learning process

Characteristic of the theory	Behaviourism	Cognitivism	Constructivism
Pre-requisite	Defined entry behaviour	Prior knowledge in mental models	Zone of proximal development; Cognitive readiness
Perception of learners	Standardisation and conformity	Individualisation within standard tuition	Customisation; Supports diversity of learners
	Passive recipients	Interactive participants	Active constructors
	Instructor-centric; Instructor and instructional materials mediate knowledge	Instructor as facilitator and materials as activators of knowledge	Learner-centric; Tasks and problems that are personally relevant.
	Direct instruction	Supported cognitive processes	Anchored instruction; Apprenticeship
Nature of Learning process	Simplification of complexity	Integrate new with prior knowledge	Cognitive conflict, complexity, and incongruities
	Linear learning of components; Sequence of events	Non-linear integration And association	Contextualized learning activities; Problem-solving
	Teaching and practice segments interspersed	Guided practice	Real-life tasks; Scaffolding to support learning activities
	Events of instruction: Gain attention, explain objectives, stimulate prior knowledge, present stimuli, guide learning, elicit performance, feedback, assess performance, enhance retention and transfer.	Relate to prior learning; Support decision-making; Foster self-monitoring and metacognitive skills; Activate learning strategies; Enable transfer; Motivational (ARCS) Application of learning	Learning experiences: Holistic approach,; Collaborative learning; Rich learning environments and tools; Refinement and evolution of beliefs; Multiple perspectives Problem-driven learning
Expected learning outcomes	Observable, measurable behaviour and skills; What learners do	Internal cognitive activity; Mental models; What learners know and how they know it	Reflection; Learners-ownership of both process and problem
	Information transferred and knowledge instilled	Information assimilated and re-assembled	Knowledge constructed from personal experience
Approach to domain	Cover domain comprehensively	Grasp interrelationships; Classify, organise , decode	Information access, extraction, exploration and organisation
Learner-	Automaticity;	Deep understanding;	Just-in-time, as needed;

content relationship	Mastery	Discovery	Exploration
	Bottom-up	Integrated	Top-down
	Predetermined solutions to problems	Fixed problems and solutions	Open-ended activities
Ethos	Individual achievement; Competitive ratings	Individual achievement; Cognition	Social context; Cooperative; Collaborative
Role of computer / technology	Technology controls learning (tutor)	Towards learner control	Technology as tool; Augmenting learning
	Drill and practice; tutorials; Scoring and record-keeping	Tutorials incorporating scoring and record-keeping	Internet and other navigable resources; Multimedia

Table 3.6 Actual instruction and learning: The learning process

Characteristic of the theory	Behaviourism	Cognitivism	Constructivism
Purpose of assessment	Assessment corresponds with objectives (may be drawn up before instruction is developed)	Assessment according to objectives	Goal-free / socially-constructed goals / personal goals
	Master sub-skills in prescribed sequence	Components and composite skills	Authentic tasks
Mechanism of assessment	Criterion-referenced assessment; Assessment instruments		Integrated assessment
	Correct solutions exist		Open-ended problems
	Bring learners to prescribed level	Elicit reasoning	Learning gain
	Formal testing; Frequently multiple choice	Formal testing	Multi-modality, i.e. portfolio assessment and project assessment
	Mark allocation (grading) by instructor		Peer evaluation; Self evaluation; Evaluation by facilitator
	Quantified measures		Qualitative measures; Context-dependent
View of errors	Negative reinforcement after error; Branching	Self-adjustment after error	Positive stimulants leading to Strategic exploration; Tentative beliefs challenged by errors

As indicated in the preceding tables, there are major variations between the theories with respect to the sequence and the tasks of the instructional systems design process and equally powerful variations in the resulting products. Traditional instructional systems development within the behavioural, and to an extent, in the cognitive school, is a highly structured process. Constructivist design, on the other hand, cannot be limited to process design models, but is a more open and free process - sometimes aimed at developing specific resources, but often entailing the inter-relating of existing resources and defining learner-activities in the environment so created. Similarly, learning and instructional experiences are predetermined under behaviourism, relatively constrained under cognitivism, and much more flexible within constructivist situations.

What do these differences between the theories suggest in the context of preschool education? Differing theories are currently being used within the instructional design for preschool education, leading to quite different answers to the same questions, with parallel implications for the theorist, the designer, and the instructional practitioner. The differences are major, with origins deep in the core of the theories (Willis, 1998). Willis suggests that designers of instruction usually take one of three positions:

1. Decide which theory he/she accepts, and practice solely within its principles in a partisan fashion, making no attempt to design within two differing stances.

2. Separate core theory issues from instructional strategy issues. This entails partial reconciliation of conflicting theories, as a practitioner is a proponent of one instructional design position, but supports the use of certain strategies from another persuasion under certain circumstances.
3. Place themselves within a particular theory, but accept that none of the current instructional design models have such firm foundations that they can be considered reliable. In other words, open democratic pragmatism is a basis for design and development that accommodates open-mindedness to methods and results from other theories, and even permits a change of theory.

The last approach is the one Willis recommends, and is the persuasion of the researcher, who believes in an open approach, which integrates where appropriate and uses different methods and models in tandem where appropriate.

3.1.5 Experiential Learning

Until the first half of this century, a reductionist view of human behaviour - behaviourism – had dominated the field. Behaviourism, a Pavlovian view of human learning developed by Watson, Hull and Thorndike reached its heyday in the 1950's, in B.F. Skinner's work on operant psychology and reinforcement. It was reductionist because it used a "black box" approach based in empiricism, much like the approach a chemist might use. Since one cannot observe what is happening in the brain, we should limit our measurements and theories to merely what is going in - the stimulus - and what is coming out - the response. But such a simplified view left much to be desired. Classical conditioning alone could not explain what Jean Piaget had observed, that

children go through stages of development that have no relation to external stimuli. Somehow, he proposed, the brain itself is actively involved in the learning process.

As a result, the sixties and seventies saw the reductionist view displaced by far more complex non-reductionist views. The work of Piaget - child development and schema - and Gagne - eight categories of learning led to new interpretations known as as cognitivism and constructivism theories..

Although these theories acknowledged the importance of experience, but neither could formulate an adequate theory as to its function in learning.

Experiential learning is an educational philosophy first developed in the late nineteenth century and has since been articulated in a variety of fields including cooperative education, internships, outdoor education, organizational development and training, and service- learning. (NSEE. 1997)

This philosophy was captured by John Dewey, the philosophical father of experiential education (Neill.2002). Dewey's theory of experience is that experience arises from the interaction of two principles - continuity and interaction. All experiences influence one's future for better or for worse, which is continuity. Interaction refers to the situational influence on one's experience. In other words, one's current experience is a function of the interaction between one's past experiences and the present situation.

As an integrative theory, Experiential Learning rests on a diverse set of theoretical traditions, including Dewey's pragmatism, Lewin's

social-psychology, Piaget's cognitive development, Rogers's client-centred therapy, Maslow's humanism and Perls' gestalt therapy. We will see later how the underpinning principles of this theory bring together the underlying principles of behaviourism, cognitivism and constructivism.

3.1.5.1 Experiential Learning Cycles

Experiential Learning Cycles are models that break down the process of experiential learning into theoretical stages (Exeter.2001). Arguably, the theory underlying Experiential Learning Cycle models constitutes the main 'science of experiential learning', and thus Experiential Learning Cycle models are amongst the most important pieces of theory in experiential and outdoor education. (Kelly, 1997). Figure 3.1 shows the Experiential Learning Cycle as in Exter (2001).

3.1.5.2 Principles of Experiential Learning:

According to Exeter (2001), there is a number of principles underpinning Experiential Learning. These are:

- The learner is a participant rather than a spectator in learning .
- Experiential learning occurs when carefully chosen experiences support reflection, critical analysis, and synthesis .
- Learning must have present as well as future relevance for learners and the society in which they will participate .

- Throughout the experiential learning process, learners are actively engaged in posing questions, investigating, experimenting, being curious, solving problems, assuming responsibility, being creative, and constructing meaning.

- Learners are engaged intellectually, emotionally, socially, and/or physically. This involvement helps produce a perception that the learning task is authentic .

- Individuals may experience success, failure, adventure, risk-taking, and uncertainty, since the outcomes of experience cannot be totally predictable.

- Educator's primary roles include: structuring appropriate experiences, posing problems, setting boundaries, supporting learners, insuring physical and emotional safety, and facilitating the learning process.

- Educators must recognize and encourage spontaneous opportunities for learning .

- The design of the learning experience includes the possibility to learn from natural consequences, mistakes, and /or successes.

- Learners develop an in-depth understanding of what theory from reading or lectures might mean in actual practice .

- The results of the learning are personal and form the basis for future experiences and learning.

- Relationships are developed and nurtured: learner to self, learner to others, and learner to the world at large .

- Educators strive to be aware of their biases, judgments, and pre-conceptions and how they influence the learner .

- Individuals increase their awareness of how personal values and meanings influence their perceptions and choices of action.

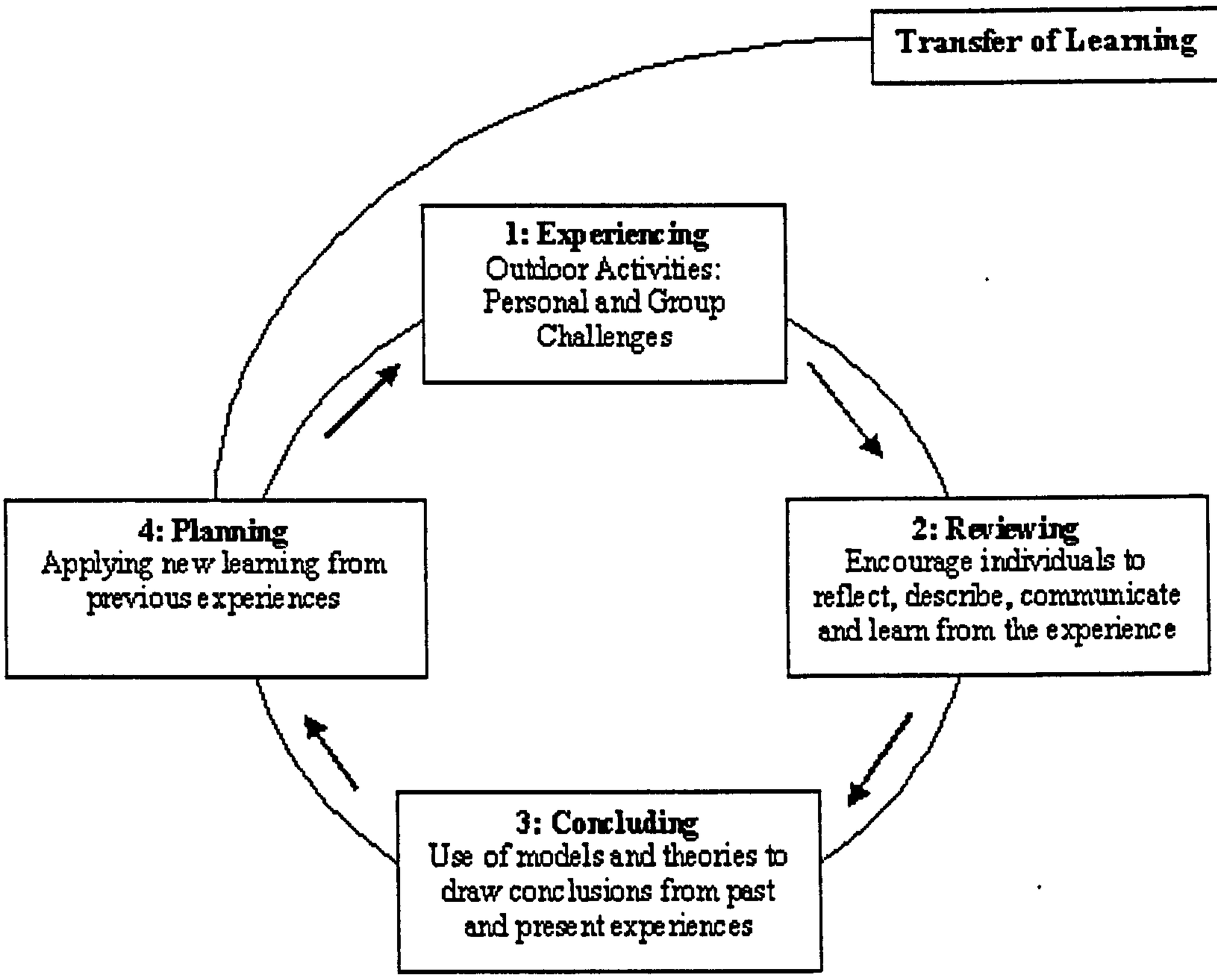
- Educators use a multi-disciplinary approach to the study of real-life problems .

- Individuals have the opportunity to recognize how institutional, social and cultural factors may cause people to act in ways that contradict personal and professional intentions.

Figure 3.1.

The Experiential Learning Cycle

(Exeter, D. J. (2001) Learning in the Outdoors. London, Outward Bound)



3.1.6 The role of play in early childhood education

Decades of research has documented that play has a crucial role in the optimal growth, learning, and development of children from infancy through adolescence. Yet, this need is being challenged, and so children's right to play must be defended by all adults, especially educators and parents. The time has come to advocate strongly in support of play for all children.

According to the behaviourist stimulus-and-response theory, play serves to either raise or lower levels of stimulation, depending on whether a child is under- or over-stimulated. Play provides novelty, uncertainty and complexity at optimal levels for children; these qualities in optimal amounts are seen to be most conducive to individual functioning. The balance between the new and the familiar is often seen applied to education.

Cognitivism, however, shifted the focus from social and emotional aspects of play to children's cognition. Piaget (1962) placed play within his stage-based theory of cognitive development and assigned it a significant role in the growing of children's minds. Underpinning his views of how play contributes to children's cognitive development are two processes whereby children construct knowledge, assimilation and accommodation. Piaget maintained that it is assimilation that is dominant in play—children take something and make it fit to what they know, such as when a child makes rolled paper to be a royal sceptre. Talking about symbolic play, he outlined the importance of play in the development of children's mental representation and abstract thinking.

This idea was further developed by constructivism. Vygotsky (1978) viewed play as highly significant to development. 'Play contains in a concentrated form, as in the focus of a magnifying glass, all developmental tendencies.' (Vygotsky 1978:74). Vygotskians view play as the most significant "leading" activity of the early childhood years. This means that the most significant psychological achievements of the early childhood age occur while children engage in play.

In the context of experiential learning, play is a very appropriate activity in the context of learning for sustainable development. Games can play a role particularly all of the four stages of Kolb's learning cycle. When children play games, they simulate and create realities, with certain mutually accepted rules, roles, conditions and assumptions. When they play games, they can fairly easily 'take the role of others' and develop an emotional understanding of why others act as they do. The beauty of playing games is that children can 'learn by doing' and 'learn by failing' without negative consequences for the real world. They can simulate certain realities, play, manipulate and experiment and experience what the consequences are or what they might become. In case the consequences are negative, they know what NOT to do and they can design alternative approaches or alternative goals. The added value of games is the fact that within games, children can create shared experiences. This is extremely important since this is the start to arrive at shared problem definitions and shared views of solutions.

Play is a dynamic process that develops and changes as it becomes increasingly more varied and complex. It is considered a key facilitator for learning and development across domains, and reflects the social and cultural contexts in which children live (Christie, 2001; Fromberg, 2002).

Theorists (Sylva, 1976; Shore, 1997; Jensen, 2001; Christie, 2001; Fromberg, 2002), regardless of their orientation, agree that play occupies a central role in children's lives. They also suggest that the absence of play is an obstacle to the development of healthy and

creative individuals. Psychoanalysts believe that play is necessary for mastering emotional traumas or disturbances; psychosocialists believe it is necessary for ego mastery and learning to live with everyday experiences; constructivists believe it is necessary for cognitive growth; maturationists believe it is necessary for competence building and for socializing functions in all cultures of the world; and neuroscientists believe it is necessary for emotional and physical health, motivation, and love of learning.

Moreover, findings from the recent explosion of research on the brain and learning also delineate the importance of play (Jensen, 2001; Shore, 1997). We know that active brains make permanent neurological connections critical to learning; inactive brains do not make the necessary permanent neurological connections. Research on the brain demonstrates that play is a scaffold for development, a vehicle for increasing neural structures, and a means by which all children practice skills they will need in later life. This raises new questions for those who view play as a trivial, simple, frivolous, unimportant, and purposeless behaviour and challenges them to recognize play for what it is--a serious behaviour that has a powerful influence on learning (Christie, 2001). Such an attitude shift could increase the level of respect accorded to currently undervalued activities such as recess, physical education, the arts, and rich personal adult/child interactions.

Both theorists and researchers do concur upon a common set of characteristics that distinguish play behaviours from non-play behaviours for children across all ages, domains, and cultures. These

unique features include behaviours that are: 1) intrinsically motivated and self-initiated, 2) process oriented, 3) non-literal and pleasurable, 4) exploratory and active, and 5) rule-governed (Fromberg, 2002; Christie, 200). These features make play both a process and a product. As a process, play facilitates individual understanding of skills, concepts, and dispositions; as a product, play provides the vehicle for children to demonstrate their understanding of skills, concepts, and dispositions (Fromberg, 2002).

To best understand the relationship of play to learning and development, teachers must be knowledgeable about the research base and typical characteristics that describe how play enhances all children's learning and development. From this knowledge base, teachers will be able to argue convincingly and make appropriate decisions about providing adequate opportunities and time for all children to play (Christie, 2001; Fromberg, 2002).

Regarding Physical Development, because play often involves physical activity, it is closely related to the development and refinement of children's gross and fine motor skills and their body awareness. As children vigorously and joyfully use their bodies in physical exercise, they simultaneously refine and develop skills that enable them to feel confident, secure, and self-assured. In societies where children experience pressure to succeed in all areas, confidence and competence are essential (Berk, 2002; Fromberg, 2002).

In terms of Social and Emotional Development, as social organisms, humans have a basic need to belong to and feel part of

a group and to learn how to live and work in groups with different compositions and for different purposes. Play serves several functions in satisfying these needs and developing these social and emotional life skills. For example, children of all ages need to be socialized as contributing members of their respective cultures. Numerous studies (Berk, 2002; Erikson, 1963; Piaget, 1962; Vygotsky, 1978) indicate that play with others gives children the opportunity to match their behaviour with others and to take into account viewpoints that differ from their own. Thus, play provides the rich experience children need to learn social skills; become sensitive to others' needs and values; handle exclusion and dominance; manage their emotions; learn self-control; and share power, space, and ideas with others. At all levels of development, play enables children to feel comfortable and in control of their feelings by: 1) allowing the expression of unacceptable feelings in acceptable ways and 2) providing the opportunity to work through conflicting feelings.

In terms of Cognitive Development, evidence also suggests a strong relationship between play and cognitive development. Studies indicate a positive relationship between play and student learning. They identify improvements to attention, planning skills, and attitudes; creativity and divergent thinking; perspective-taking; memory; and language development.

Active play fosters personal meaning. When children perceive events as personally relevant, their neural connections proliferate and situations, ideas, and skills become part of their long-term memory. Meaningless concepts, such as isolated facts, are irrelevant and

typically will not become part of long-term memory (Fromberg, 2002).

Moreover, play and play contexts support intrinsic motivation that is driven by positive emotions (Jensen, 1999). Positive emotions, such as curiosity, generally improve motivation and facilitate learning and performance by focusing a learner's attention on the task; negative emotions, such as anxiety, panic, threats, and stress, generally detract from motivation. Curiosity, flexible and insightful thinking, and creativity are major indicators of the learner's intrinsic motivation to learn, which is in large part a function of meeting basic needs to be competent and to exercise personal control. Because play is intrinsically motivating, learners perceive it to be interesting, personally relevant, meaningful, and appropriate in terms of their abilities and their expectations of success (Johnson et al., 1999)

Play-based learning activities provide multiple ways for children to learn a variety of different skills and concepts. They allow children the opportunities to learn relevant skills and feel competent about their ability to learn. When children are concerned about their competence or adequacy, they cannot make sense of their learning because emotions drive attention, create meaning, and forge their own memory pathways (Goleman, 1995). Children are more likely to feel successful when they can experience active, meaningful learning; use complex, challenging, and varied materials; learn in a safe, non threatening environment; and receive accurate and timely feedback (Fromberg, 1998, 2002; Jensen, 1999).

In sum, the researcher believes that all educators, parents, and policymakers must take the lead in articulating the need for play experiences in children's lives, including the curriculum. It is imperative that these key people who work with or for children in preschools fully understand play and its diverse forms. Equally important is the ability to use that knowledge to achieve what is best for children in all settings. Thus legitimizing play as an appropriate activity in our preschools is a necessity. Therefore, educators, families, and policymakers can and should:

- Optimize brain functions by providing rich experiences that include a variety of learning materials, feedback, appropriate levels of challenge, and enough time to process information.
- Rethink and transform the nature of relationships and communication between adults and children.
- Make play a fundamental part of every school curriculum.
- Recognize, respect, and accept play in all its variations as worthwhile and valuable.
- Balance work and play to ensure that children reap the benefits of intrinsic motivation and experience sheer joy in their endeavours.
- Balance encouragement and opportunity to fulfil children's natural tendency and need to play; children will find the means to play if the environment affords an opportunity to do so.
- Create a climate of acceptance by respecting children's play choices, recognizing the cultural context in which play occurs, and providing many play options.

3.1.7 Reflective Teaching

Although Experiential Learning main concern is the connecting of learning to real life situations, it is a theory that defines the cognitive processes of learning. In particular, it asserts the importance of critical reflection in learning.

According to Pollard (2003,p.12) *"the notion of reflective teaching stems from Dewey (1933) who contrasted ' routine action' with 'reflective action'. According to Dewey routine action is guided by factors such as tradition, habit and authority and by institutional definitions and expectations. By implication it is relatively static and is thus unresponsive to changing priorities and circumstances. Reflective action, on the other hand, involves a willingness to engage in constant self-appraisal and development. Among other things, it implies flexibility rigorous analysis and social awareness."*

In review of the literature on reflective teaching, one discovers that there is much variance in the definition. In the 1930s, John Dewey defined reflection as a proactive, ongoing examination of beliefs and practices, their origins, and their impacts (Stanley, 1998). Pennington (1992, p.47) defines reflective teaching as "deliberating on experience, and that of mirroring experience." Pennington states that "the term reflective teaching has come to signify a movement in teacher education, in which student teachers or working teachers analyze their own practice and its underlying basis, and then consider alternative means for achieving their ends..." (1992, p.48). She continues, "The use of the term reflection in the context of instruction can be interpreted in the sense of (1) thoughtful consideration, as well as in the sense of (2) mirroring, symbolizing or representing" (p.48). Another definition comes from

Richards & Lockhart (1994, p.1). They state that a reflective approach to teaching is "one in which teachers and student teachers collect data about teaching, examine their attitudes, beliefs, assumptions and teaching practices, and use the information obtained as a basis for critical reflection about teaching." Because such reflection involves a critical component, reflective teaching can serve as a means of contributing to one's professional development.

Pollard (2003, p.13) gives seven key characteristics of reflective practice. These are:

1) An active concern with aims and consequences, both in classroom practice and beyond. The 'reflective practitioner' should acknowledge the wider processes beyond the classroom, including politics, and be willing to explore those external processes through their teaching in order to contribute towards that society, both as a citizen and as a professional.

2) The application of reflective teaching in a cyclical process .This involves the teacher engaging in a cycle of planning, monitoring, evaluating and revising practice. The teacher becomes not just the deliverer of learning, but the researcher, improver and developer, who by their own practice is contributing to the broader picture .

3) Competence in the techniques of classroom inquiry .Particularly the competencies of gathering information, analysis and evaluation, each of which contributes to the cyclical process of reflection. These competencies are essential to be able to document the results of the work being carried out in the classroom and beyond.

4) Attitudes of open mindedness, responsibility and wholeheartedness. These are key personal characteristics which contribute considerably to the commitment of the teacher, and which can at times be seen to be particularly under pressure in times of rapid change and development .

5) Teacher judgement, informed by self reflection and insights from across the whole educational spectrum .The capacity to make conclusions both from the teacher's own perspective, and by using the research of others. An emphasis on the comparative and collaborative aspects of research, classroom experience, and informed writing ensures the teacher does not take an isolated view.

6) Collaboration with colleagues is seen as a both a learning experience for teachers and a route towards the contextualisation of their own practice. Collaboration produces discussion and action together with reflection as the result of a group of minds not just one.

7) The ability to creatively mediate externally developed frameworks for teaching and learning. This involves the interpretation of external requirements in the light of a teacher's understanding of a particular context and bearing in mind his or her values and educational principles.

Recent research on reflective practice has used different terms to define reflective teaching. There are at least five major approaches to the study of reflective practice (Table 3.3).

The first type of reflection "**technical rationality**" examines teaching behaviours and skills after an event, such as a class. The focus of reflection is on effective application of skills and technical knowledge

in the classroom and it also focuses on cognitive aspects of teaching (Schulman 1987). Many beginning teachers start to examine their skills from this perspective in controlled situations with immediate feedback from teacher educators. The beginning teacher is trying to cope with the new situation of the classroom.

Table 3.7 Approaches to Reflective Teaching

Reflection Type	Author	Content of Reflection
Technical Rationality	Schulman 1987	Examining one's use of skills and immediate behaviours in teaching with an established research/theory base.
Reflection-in-action	Schon, 1987	Dealing with on-the-spot professional problems as they occur. Thinking can be recalled and then shared later.
Reflection-on-action	Schon 1987; Hatton and Smith 1995; Gore and Zeichner 1991	Recalling one's teaching after the class. Teaching gives reasons for his/her actions/behaviours in class.
Reflection-for-action	Killon and Todnew 1991	Proactive thinking in order to guide future action.
Action Research	Carr and Kemmis 1986	Self-reflective enquiry by participants in social settings

The second type of reflective practice is called **reflection-in-action** (Schon 1987). For this to occur, the teacher has to have a kind of knowing-in-action. Knowing-in- action is analogous to seeing and recognizing a face in a crowd without "listing" and piecing together separate features; the knowledge we reveal in our intelligent action is publicly observable, but we are unable to make it verbally explicit. Schon (1987) says that we can sometimes make a description of the tacit, but that these descriptions are symbolic constructions; knowledge-in- action

is dynamic, facts are static. For Schon (1987), thought is embedded in action and knowledge-in- action is the centre of professional practice.

Reflection-in-action, again according to Schon (1987), is concerned with thinking about what we are doing in the classroom while we are doing it; this thinking is supposed to reshape what we are doing. There is a sequence of "moments" in a process of **reflection-in-action**: (a) A situation or action occurs to which we bring spontaneous routinized responses, as in knowing-in- action; (b) Routine responses produce a surprise, an unexpected outcome for the teacher that does not fit into categories of knowing-in- action. This then gets our attention; (c) This surprise leads to reflection within an action. This reflection is to some level conscious but need not occur in the medium of words; (d) Reflection-in-action has a critical function. It questions the structure of knowing-in-action. Now we think critically about the thinking that got us there in the first place; (e) Reflection gives rise to on-the-spot experimentation. We think up and try out new actions intended to explore newly observed situations or happenings. Schon (1987) says that **reflection-in-action** is a reflective conversation with the materials of a situation.

The third type of reflection is called **reflection-on-action**. **Reflection-on-action** deals with thinking back on what we have done to discover how our knowing-in- action may have contributed to an unexpected action (Schon 1987; Hatton and Smith 1995). This includes reflecting on our **reflecting-in-action**, or thinking about the way we think, but it is different from **reflecting- in-action**.

The fourth type of reflection is called **reflection-for-action**. **Reflection-for-action** is different from the previous notions of reflection

in that it is proactive in nature. Killon and Todnew (1991:15) argue that reflection-for-action is the desired outcome of both previous types of reflection, **reflection-in-action** and **reflection-on-action**; however, they say that "we undertake reflection, not so much to revisit the past or to become aware of the meta-cognitive process one is experiencing (both noble reasons in themselves) but to guide future action (the more practical purpose)."

The fifth type of reflection is connected to **action research**. **Action research** is the investigation of those craft-knowledge values of teaching that hold in place our habits when we are teaching (McFee 1993). It concerns the transformation of research into action. As McFee (1993:178) says: "*It is research into (1) a particular kind of practice- one in which there is a craft- knowledge, and (2) is research based on a particular model of knowledge and research with action as outcome...this knowledge is practical knowledge.*"

Reflective teaching can benefit teachers in four main ways: (1) Reflective teaching helps free the teachers from impulse and routine behaviour. (2) Reflective teaching allows teachers to act in a deliberate, intentional manner and avoid the "I don't know what I will do today" syndrome. (3) Reflective teaching distinguishes teachers as educated human beings since it is one of the signs of intelligent action. (4) As teachers gain experience in a community of professional educators, they feel the need to grow beyond the initial stages of survival in the classroom to reconstructing their own particular theory from their practice. Dewey (1933:87) said that growth comes from a "*reconstruction of experience*" so by reflecting on our own experiences, we can reconstruct our own educational perspective.

Lange (1990:240) asserts that "*The reflective process allows developing teachers' latitude to experiment within a framework of growing knowledge and experience. It gives them the opportunity to examine their relations with students, their values, their abilities, and their successes and failures in a realistic context. It begins the developing teacher's path toward becoming an expert teacher.*"

3.2 Preschool curriculum models

The term curriculum model refers to a conceptual framework and organizational structure for decision making about educational priorities, administrative policies, instructional methods, and evaluation criteria. Although they vary in their underlying premises, curriculum models provide well-defined frameworks to guide program implementation and evaluation.

A wide range of early childhood curriculum models exists, but little is known about the number of early childhood curriculum models presently in use or the number of early childhood programs that use them.

Among the best known and most widely used early childhood curriculum models are the Waldorf Curriculum, Reggio Emilia model, the Montessori Method, the High/Scope Curriculum, and the project approach. Theories of child development have served as the principal foundation for curriculum model development and variations among curriculum models reflect differences in values concerning what is more or less important for young children to learn, as well as in the process by which children are believed to learn and develop. These variations inform

the role of teachers, the curriculum's focus, the classroom structure, and the ways in which children participate in learning.

Early childhood curriculum models also vary in terms of the freedom granted to teachers to interpret implementation of the model's framework. Some curriculum models, like Waldorf and Montessori, are highly structured and provide detailed scripts for teacher behaviours. Others, like Reggio Emilia Model, emphasize guiding principles and expect teachers to determine how best to implement these principles. Curriculum models, regardless of their goals and the degree of flexibility in their implementation, however, are designed to promote uniformity across early childhood programs through the use of a prepared curriculum, consistent instructional techniques, and predictable child outcomes.

Some question whether what is known as Developmentally Appropriate Practice (DAP), as described by the National Association for the Education of Young Children (NAEYC), should be classified as a curriculum model. But DAP does not meet all the criteria of a curriculum model. It was created not as a fully developed curriculum but as a tool to help practitioners and policy makers distinguish between appropriate and inappropriate teaching practices with young children, regardless of the curriculum approach under review.

Comparative evaluations now suggest that early childhood curriculum models do affect child outcomes. Differences in child outcomes among models tend to reflect the intent of the curriculum model being evaluated. Further, findings are accumulating that suggest potential negative consequences associated with highly structured,

academic preschool programs (Marcon, 1999; Schweinhart & Weikart, 1997; Goffin & Wilson, 2001).

In the remainder of this section, the most widely used early childhood curriculum models including the Waldorf Curriculum, Reggio Emilia model, the Montessori Method, the High/Scope Curriculum, and the project approach will be discussed.

3.2.1 Waldorf Curriculum

Waldorf education was founded by Rudolf Steiner (1861-1925), an Austrian scientist and philosophical thinker. In 1919, in the wake of the devastation of World War I, Steiner was invited by Emil Mott to found a school for the employees of the Waldorf-Astoria cigarette factory in Stuttgart, Germany. The vision was that this new kind of school would educate human beings able to create a just and peaceful society. It defied the conventions of the time in being coeducational (bringing boys and girls together in the classroom), open to children of any background (without entrance examination), comprehensive (from preschool level through high school), and independent of external control (a self-governing administrative unit). Today, Waldorf education continues to be a well-defined model with every school administratively independent (Oppenheimer, 1999).

Rudolf Steiner believed in a unity of spirit, soul, and body, and that good education restores the balance between thinking, willing, and feeling (Steiner, 1995). His theory of child development elaborated three cycles of seven-year stages, each with its own distinctive needs for learning—an ascending spiral of knowledge. Before age 7, nursery and kindergarten children learn through imitation and doing (Schwartz,

1996). Imaginary play is considered the most important "work" of the young child and the activity through which the child grows physically, intellectually, and emotionally. The educational focus is on bodily exploration, constructive and creative play, and oral (never written) language, story, and song. On a given morning, children might do such things as sing songs, paint with watercolours, colour with beeswax crayons, cook, hear a story told with puppets, go on a nature walk, work in the garden, build with wooden blocks, or make houses using play stands and cloth. Through these activities, they become deeply engaged and develop powers of concentration and motivation. A significant portion of the school morning is devoted to uninterrupted imaginary play. Recognition of the importance of "rhythm" and of balance of energetic and restful play leads teachers to follow a cyclical schedule of yearly, weekly, and daily activities, including festivals and foods. From 7 to 14 years, children stay with the same teacher and classroom group, and they become a very close-knit group as they explore the world through conscious imagination or "feeling intelligence" (Finser, 1995). The teacher presents a curriculum that has structure and sequence but that relies on lessons unaccompanied by textbooks. This approach fosters an integrated, multi-sensorial approach to learning and expression, with more emphasis on oral listening and memory than is found in other early childhood models for the primary years. For example, the teacher might introduce an arithmetical operation by telling a story where the numbers are characters in a drama or render the history of the Norman Conquest as an exciting tale. Children listen as the teacher presents the material, and they integrate what they have learned as they design and illustrate with care and beauty their own lesson books. In essence, they compose their own texts, which preserve for them what they have learned in their

own personal format, documents and treasures of their learning experiences. Children study literature, folktales, and mythology; rhythmic musical movement (eurythmy); practical crafts; natural sciences; foreign languages; art; and music. Out of doors, they may construct play shelters with boards, branches, and other materials. During the high school years, the rational, abstract power of the intellect emerges, and adolescents focus on ethics, social responsibility, and mastery of complex and rigorous subject matter, with specialized teachers. Images of Waldorf education grades K-12 in four different schools can be found in the video "Waldorf Education: A Vision of Wholeness" (Hagens Recording Studio, 1996).

The Waldorf teacher generally plays a performance role in the classroom as he or she leads or models many whole-group activities involving integration of the academic and the artistic with an explicit spirituality. The teacher is also a didactic moral leader, seeking to provide an intimate classroom atmosphere permeated with a sense of harmony and full of themes about caring for the community and for the natural and living worlds. The teacher needs a classroom in which children can bring together their thinking, feeling, and willing, no matter what their personalities and temperaments. Colour and the use of natural materials and carefully chosen props (such as open-ended, handmade toys and dolls with minimal detail to encourage the imagination) are intrinsic to the uncluttered, warm and homelike, aesthetically pleasing Waldorf environments (Schwartz, 1996).

Teachers seek to encourage the child's natural sense of wonder, belief in goodness, and love of beauty. They are more reticent at the early childhood levels of Waldorf and more directive and didactic in the

elementary and secondary classrooms. In the kindergarten classroom, teachers seek to be subtle in their guidance, yet always aware of everything going on in the room (Schwartz, 1996)

In Waldorf approach, children are assessed by means other than traditional tests and grades. Instead, parents receive extensive descriptive information about their children's daily life and progress and share in culminating productions or performances. Portfolios or other products of children's individual and group work may be displayed and sent home at key intervals and transitions.

Child outcome research is not intrinsic to the way educators work in Waldorf approach. For Waldorf, testimonials of parents and graduates are gathered as examples and evidence of effectiveness (e.g., Learning to Learn from AWSNA, n.d), and creativity also has been studied (Ogletree, 1996).

3.2 .2 Montessori Method

Maria Montessori (1870-1952) was the brilliant figure who was Italy's first woman physician. After developing an innovative methodology for working with children with disabilities, she started her Casa dei Bambini (Children's House) in 1907 for children ages 4 through 7 in a housing project in the slums of Rome. Her movement spread to other countries, especially after the Fascist regime denounced Montessori methods of education and she left Italy. In the United States, there was strong but brief interest from 1910 to 1920, but then Montessori education fell out of favor (Torrence & Chattin-McNichols, 2000).

During this time, however, the movement flourished in Europe and India. In the 1950s, American educator Nancy Rambush led a movement of renewal, and Montessori education spread as an independent school movement. There are probably 5,000 or more schools calling themselves "Montessori" in the United States (Ruenzel, 1997).

Maria Montessori's approach reflects a theoretical kinship with the European progressive educational philosophers Rousseau, Pestalozzi, Seguin, and Itard. She believed in children's natural intelligence, involving from the start rational, empirical, and spiritual aspects. She saw development as a series of six-year periods, like repeating triangular waves, each with its own particular sensitivities. A constructivist, she posited an active child, eager for knowledge and prepared to learn, seeking perfection through reality, play, and work. In Montessori education, children usually are grouped into multiage classrooms spanning three years, in order to promote adult-child continuity and close peer relationships. Birth to age 3 is the time of the "unconscious absorbent mind," whereas age 3 to 6 is the time of the "conscious absorbent mind" (Montessori & Chattin-McNichols, 1995). In both, the child seeks sensory input, regulation of movement, order, and freedom to choose activities and explore them deeply without interruption in a carefully prepared (serene and beautiful) environment that helps the child choose well (Greenwald, 1999). During the infant-toddler (birth to age 3) and primary (age 3 to 6) years, classrooms usually have more than one teacher. To introduce new curriculum, teachers present demonstration lessons at the point when an individual or small group indicates readiness to advance in the sequence of self-correcting materials, in the areas of practical life, sensorial, mathematics, language, science and geography, and art and music. The Montessori curriculum is highly individualized

but with scope and sequence and clear-cut domains. The individualization results in some young children mastering reading and writing before age 6 following Montessori "writing to read" methods. Preschool children in full-day programs usually address the Montessori curriculum in the morning and typical child-care play including fantasy play in the afternoon. From age 6 to 12, children are expected to explore a wider world and develop rational problem solving, cooperative social relations, imagination and aesthetics, and complex cultural knowledge. From 12 to 18, children reconstruct themselves as social beings and are humanistic explorers, real-world problem solvers and rational seekers of justice. (Ruenzel, 1997)

The Montessori teacher plays the role of unobtrusive director in the classroom as children individually or in small groups engage in self-directed activity. Based on detailed, systematic observation of the children, the teacher seeks to provide an atmosphere of productive calm as children smoothly move along in their learning, alternating between long periods of intense concentration interspersed with brief moments of recovery/reorganization (Oppenheimer, 1999). The teacher's goal is to help and encourage the children, allowing them to develop confidence and inner discipline so that there is less and less need to intervene as the child develops. Interrupting children when engaged in purposeful activity interferes with their momentum, interest, and inner workings of thought (Greenwald, 1999). During the early childhood years, the teacher brings the young child into close contact with reality through sensory investigation and practical activity and then relies on the child's unfolding inner program of curiosities and sensitivities to ensure that the child will learn what he or she needs. With the younger students at each level, the teacher is more active, demonstrating the use of materials and presenting

activities based on an assessment of the child's requirements. Montessori classrooms provide carefully prepared, orderly, pleasing environments and materials where children are free to respond to their natural tendency to work individually or in small groups (see http://www.montessori-namta.org/ or the videotapes and slide sets for parent education from the North American Montessori Teachers' Association). Books, toys, and materials are carefully chosen to favour refined quality and natural materials. Books present images of the real world in a beautiful way, waiting to introduce fantasy until age 5 or 6.The children progress at their own pace and rhythm according to their individual capabilities. The school community as a whole, including the parents, work together to open the children to the integration of body, mind, emotions, and spirit. That is the basis of holistic peace education (accepting and relating harmoniously with all human beings and the natural environment).

The American Montessori Association issued a position paper on "Learning and Assessment" that recommends that assessment procedures in American classrooms move toward formats (such as portfolios, presentations, multimedia projects) that more authentically gauge children's ability to interrelate ideas, think critically, and use information meaningfully (http://www.amshq.org/).

Ono its internet website, the American Montessori Society claims that Montessori education has been the friendliest of the other approaches to empirical research on child learning outcomes. It adds that many studies have demonstrated the effectiveness of Montessori methods and provided insight into children's gains with respect to reading and literacy, mathematics, and motivation. The American Montessori Association sponsors a Teachers' Research Network to promote teacher reflection on

classroom practice. Their activities include training teachers in working with research mentors, interpreting research, framing questions, using qualitative and quantitative methods, and conducting joint comparative studies between types of schools. The organization also sponsors an annual dissertation award to promote research on Montessori education. (http://www.amshq.org/)

3.2 .3 Reggio Emilia Model

Reggio Emilia is a city in northern Italy where educators, parents, and children began working together after World War II to reconstruct society and build an exemplary system of municipal preschools and infant-toddler centres (New, 1993). Under leadership of the visionary founding director, Loris Malaguzzi (1920-1994), the system evolved from a parent cooperative movement into a city-run system that exercises a leadership role in Italy and throughout Europe, and now increasingly in Asia, Australia, North America, and other parts of the world (New, 2000).

Programs in Reggio are family centred and serve children at infant-toddler and preschool levels (Gandini & Edwards, 2001), with first priority given to children with disabilities or social service needs. Reggio Emilia is not a formal model like Waldorf and Montessori, with defined methods, teacher certification standards, and accreditation processes. Instead, educators in Reggio Emilia speak of their evolving "experience" and see themselves as a provocation and reference point, a way of engaging in dialogue starting from a strong and rich vision of the child (New, 2000).

Loris Malaguzzi's thinking reflects a social constructivism drawing from Dewey, Piaget, Vygotsky, Bruner, and others. Focusing on the infant and preschool years only, Malaguzzi rejected Piaget's stage notions as too limiting. He drew a powerful image of the child, social from birth, full of intelligence, curiosity, and wonder. His vision of an "education based on relationships" focuses on each child in relation to others and seeks to activate and support children's reciprocal relationships with other children, family, teachers, society, and the environment (Malaguzzi, 1993). This resourceful child generates changes in the systems in which he or she is involved and becomes a "producer of culture, values, and rights" (Rinaldi, 2001, p. 51). Teachers seek to hold before them this powerful image as they support children in exploring and investigating. Children grow in competence to symbolically represent ideas and feelings through any of their "hundreds of languages" (expressive, communicative, and cognitive)—words, movement, drawing, painting, building, sculpture, shadow play, collage, dramatic play, music, to name a few—that they systemically explore and combine. Teachers follow the children's interests and do not provide focused instruction in reading and writing; however, they foster emergent literacy as children record and manipulate their ideas and communicate with others. The curriculum has purposive progression but not scope and sequence. Teaching and learning are negotiated, emergent processes between adults and children, involving generous time and in-depth revisiting and reviewing. Close, multiyear adult-child and peer relations are fostered, usually through a looping organization. Long-term, open-ended projects are important vehicles for collaborative work, in classroom environments carefully prepared to offer complexity, beauty, and a sense of well-being and ease. The Reggio Emilia approach was

developed within and for the municipal child care and education programs serving children under 6 and therefore is not an elementary school approach. However, progressive educators in the United States have taken useful insights from Reggio Emilia into primary education (especially with respect to project work and observation /documentation).

The Reggio teacher plays a role of artful balancing between engagement and attention (Edwards, 1998). Based on careful and sensitive listening, observation/documentation, and reflection with other adults, the teachers serve as resources and guides to the children (Rinaldi, 2001). Classroom teachers work in pairs, and collaboration and mentoring between personnel throughout the system are strongly promoted. Additional teachers especially trained in the visual arts work with teachers and children to encourage expression through different media and symbol systems. Teachers organize environments rich in possibilities and provocations that invite the children to undertake extended exploration and problem solving, often in small groups, where cooperation and disputation mingle pleasurably. Teachers also act as recorders (documenters) for the children, helping them trace and revisit their words and actions and thereby making the learning visible (Project Zero & Reggio Children, Italy, 2001). They provide instruction in tool and material use as needed, help find materials and resources, and scaffold children's learning—sometimes entering "inside the group of children," sometimes remaining attentively "on the outside." The physical environment receives much attention and supports exchange and relationships through physical qualities of transparency, reflectiveness, openness, harmony, softness, and light (Gandini, 1993). A classroom atmosphere of playfulness and joy pervades. The school and surrounding

community welcome the children into their culture and toward democratic participation.

3.2 .4 The High/Scope Curriculum

The High/Scope educational approach is an open framework of educational ideas and practices based on the principles of child development. The High/Scope approach was developed by David Weikart during the 1960's for use in the Perry Preschool program. Now known as the High/Scope Educational Research Foundation, these ideas and practices continue to be developed and refined through work with children, training of teachers, and research.

Based on the work of Jean Piaget, the High/Scope educational approach views children as active learners, who learn best from activities they plan, carry out, and reflect upon. The role of the adult in the High/Scope approach is to plan activities based on the children's interest, facilitate learning through encouragement, and engage in positive adult-child interaction strategies. The concept of active learning comes from the belief that children learn from personal interaction with ideas, direct experiences with physical objects, and application of logical thinking to these experiences.

The High/Scope approach holds the view that children's development is sequential. In addition, each child is unique at birth, and "through everyday interactions progressively differentiate into a unique personality" (The Consultative Group on Early Childhood Care and Development (CGECCD)). Similar to Montessori's sensitive periods (though not as delineated), High/Scope believes there at times when

"certain kinds of things are learned best or most efficiently" as development proceeds through ordered sequential stages (web site). Close attention is therefore paid to providing children with developmentally appropriate activities. Thought not as individualized as Montessori, High/Scope encourages learning "at a level consonant with [children's] development" (CGECCD).

A component often emphasized in the High/Scope philosophy is the belief that intervention during the preschool years upon a child's development will have long term beneficial effects, and the history of the curriculum model has sought to prove these effects. The High/Scope Child Observation Record (COR) is an outgrowth of this research emphasis. Originally used solely in research studies, the COR has become an important assessment tool for use in other research endeavours as well as in non-High/Scope yet developmentally appropriate centres (Weikart and Schweinhart, 1993).

The components of active learning are, manipulation, choice, language from the children, and support from the adults. The materials typically found in a High/Scope preschool are manipulated by children in a "hands on approach," not teacher directed approach. As children are actively involved with materials, support from the adults helps children to express what they are doing and further develop and refine their language and cognition skills. The High/Scope educational approach supports active learning through a daily routine largely made up of plan-do-review, in addition to other activities described. During the planning process children use language to make a choice about the materials they are going to work with, which provides for a consistent time to express their choice, build on their own interests, and recognize themselves as

individuals who act on decisions. Work time allows the children to carry out those plans with the support of the adults to encourage, extend those ideas and provide opportunities to solve problems. Clean-up time is naturally integrated into the plan-do-review cycle at the end of work time. At this time children return materials to their labelled places on open shelves. The other elements of the High/Scope daily routine are small group time and circle time. Small group may be used to develop closer relationships between teacher and children in which the teacher plans the materials for small group and begins the session, but leaves the remainder of the time to the children to explore the materials in an open-ended fashion. During circle time, the whole group meets together with an adult for 10-15 minutes to play games, sing songs, or do basic movement activities.

The framework or curriculum piece to the High/Scope approach is based on the key experiences which guide the teacher in supporting and extending the child's development. Such key experiences include creative representation, language and literacy, social relations and initiative, movement, music, classification, number, space, and time.

3.2 .5 The Project Approach

The Project Approach refers to a set of teaching strategies which enable teachers to guide children through in-depth studies of real world topics. The Project Approach is not unstructured. There is a complex but flexible framework with features that characterize the teaching-learning interaction. When teachers implement the Project Approach successfully,

children can be highly motivated, feel actively involved in their own learning, and produce work of a high quality. (see: www.project-approach.com/definition.htm)

A project is defined here as an in-depth investigation of a real world topic worthy of children's attention and effort. The study may be carried out by a class or by small groups of children. Projects can be undertaken with children of any age. They do not usually constitute the whole educational program. Younger children will play and explore as well as engage in projects. Older children's project work will complement the systematic instruction in their program. (see: www.project-approach.com/definition.htm)

The project method is a genuine product of the American progressive education movement. It was described in detail and definitively delimited for the first time by William Heard Kilpatrick in his essay, "The Project Method," which became known worldwide (see: Kilpatrick, 1918;).

The project method is generally considered a means by which students can (a) develop independence and responsibility, and (b) practice social and democratic modes of behaviour.

In the 1970s, it experienced a remarkable renaissance, especially in Northern and Central Europe. Many current movements of educational reform-the comprehensive school movement, the movement for community education, open curriculum, and practical learning-make reference to the project method as far as implementation of their programs is concerned. The same is true in the U.S. with numerous approaches to revamping education. Whenever constructivist concepts,

inquiry-based learning, problem-solving, and design are discussed, the "project" is considered to be one of the best and most appropriate methods of teaching. Despite a plethora of books and articles on the topic, some important points of concern exist. In particular, the conceptual distinction between the project and other teaching methods remains unclear.

Recently, however, historical research has made great progress in answering the question of when and where the term "project" was used in the past to denote an educational and learning device. According to recent studies, the "project" as a method of institutionalized instruction is not a child education movement that arose in the United States at the end of the 19th century. Rather it grew out of the architectural and engineering education movement that began in Italy during the late 16th century (Knoll 1996).

The long and distinguished history of the project method can be divided into five phases:

- 1590-1765: The beginnings of project work at architectural schools in Europe.

- 1765-1880: The project as a regular teaching method and its transplantation to America.

- 1880-1915: Work on projects in manual training and in general public schools.

- 1915-1965: Redefinition of the project method and its transplantation from America back to Europe.

- 1965-today: Rediscovery of the project idea and the third wave of its international dissemination.

The Project Approach holds a developmental perspective of the child. In particular, the dynamic dimension of development is capitalized in this approach. The three interrelated aspects of development are 1) the believe that children change over time and with experience; 2) there exists the potential for a delayed impact of early experiences upon personality development and 3) repeated or frequent experiences hold the potential for a long-term cumulative effect upon growth and development (Katz and Chard, 1989). In addition to a normative belief that children learn sequentially, the Project Approach considers the dynamics of the above interactions. As a result, rote memorizations by children or the humiliation of engaging in activities that are not fully understood are discouraged in this approach.

To demonstrate this concept, Katz and Chard (1989) describe the daily calendar activity which is common in preschools. Although the children are developmentally unable to grasp the concept of the dates shown on the calendar, the are enthusiastic to guess the dates for the teacher. "To [behave...as if one understands something when one really does not] may have the cumulative effect of undermining children's confidence in their own questions..." (Katz and Chard, 1989, p. 20).

The Project Approach differs in that it seeks to encourage the child's development of dispositions (such as the disposition for learning) which are applicable to diverse situations and are similar to the development of a 'frame of mind'. Acquisition of these dispositions cannot be taught directly and are seen as a relevant and important by-

product of engaging in the sort of activities that foster them, while teaching relevant knowledge and skills.

3.2.5.1 Systematic Instruction and Project Work

There are some parts of the curriculum in which children are necessarily dependent on the teacher and others in which children can work more independently. Particularly it can be seen that there are two aspects of the curriculum which provide for children's learning needs:

1. **systematic instruction for the acquisition of skills**

2. **project work for the application of skills acquired earlier**

Children do not only need to know how to use a skill but also when to use it. They need to learn to recognize for themselves the contexts in which the skill might be useful and the purposes which it can most appropriately serve. Project work and systematic instruction can be seen as providing complementary learning opportunities. In systematic instruction the children acquire the skills and in project work they apply those skills in meaningful contexts. The project work can be seen as the part of the curriculum which is planned in negotiation with the children and which supports and extends the more formal and teacher directed instructional elements. Table 3.8 shows the major distinctions between systematic instruction and project work.

Table 3.8

Major Distinctions between Systematic Instruction and Project Work

Systematic Instruction	Project Work
For acquiring skills	For applying skills
Activity at instructional level	Activity at independent level
Teacher directs child's work	Teacher guides the child's work
Child follows instructions	Child chooses from alternatives
Extrinsic motivation may be importan	Intrinsic motivation characterizes the work particularly
Teacher addresses child's deficiencies	Teacher builds on child's proficiencies

When a teacher is instructing a child in a new level of skill the learning tasks have to be carefully matched to the child's current abilities. When a child is applying skills in which she already has some fluency she can work independently, with more confidence, make decisions, formulate and solve problems as they arise, and be creative in applying the skills appropriately.

The types of activity or task the teacher plans will be different according to which kind of learning is intended. The teacher's role is different in relation to the child at work. Where the child is acquiring skills the teacher is more of a director whereas when children are applying skills they already have, the teacher is more of a guide. The child also feels quite different about the activity according to which kind

of learning is involved. Table 3.9 shows the teacher's and child's roles in systematic instruction and project work

Table 3.9

Teacher's and child's roles in Systematic Instruction and Project Work

	Systematic Instruction for Acquiring Skills	Project Work for Applying Skills
Examples	1- telling the time 2- bar graphs 3- designing experiments	1- investigating changebar graphs 2- doing a survey and representing the results 3- investigating water pollution
Activity	unknown, new challenging required closed, limited steps	familiar (maybe in new context) intrinsically satisfying chosen exploratory, open-ended
Teacher	instructs prescribes directs encourages effort	gives guidance suggests alternatives observes, listens, questions encourages ideas
Child	is as yet incapable follows instructions acts with help is uncertain about ability accepts teacher's evaluation works alone	is capable, proficient practices skills unaided acts independently is confident about ability judges own success often consults, collaborates

In this chapter the researcher presented and discussed the most prominent learning theories and models of learning. Each approach offers advantages and disadvantages to the preschool educator. Some successfully integrate aspects of different models. Instruction needs to make use of research and be grounded in sound educational theory. If preschool programs are created without an instructional model or ignore

what is known about educational theory, we leave learning to chance. Though each theory has elaborate research behind it, most organized instruction has been based on one model.

To take advantage of the other very useful approaches, we must overcome strong biases and beliefs. If we accept that the old ways of working are no longer complete answers in the information age, we should amplify the number of approaches we use to learn. We must evolve.

Chapter three provided an overview of the major theories that have contributed to the general knowledge of early childhood education. In addition, an overview of the most prominent preschool curriculum were provided and discussed. Chapter four describes the methodology and research methods deployed by the researcher to investigate the nature and quality of preschool curricula in Qatar. It presents and discusses the research hypothesis,, research tools, population and sample, validity and reliability of research tools.

4- CHAPTER FOUR

METHODOLOGY

The purpose of this chapter is to present and discuss the methodology and research methods deployed by the researcher to investigate the nature and quality of preschool curricula in Qatar. The hypotheses of the study, the research tools employed, population and sample, and the validity and reliability of research tools are described and explained.

This study is following the framework of evaluation research which examines the effectiveness of programs "through careful data collection and thoughtful analysis"(Patton,2002). Although evaluation is not necessarily research, it benefits from the kind of principled, systematic approach which characterizes research. This type is commonly referred to as "*evaluation research*" (Robson, 2002). In evaluation research, the focus is derived from the questions that are formulated at the very start of the evaluation process.

4.1 Hypotheses:

The purpose of this study is to investigate the quality and nature of preschool education in the State of Qatar.

For the purpose of this study, the following hypotheses were formulated:

1. There are no statistically significant differences among all teachers' evaluative estimates regarding the curriculum's achievement of the child's: Math development , Knowledge and understanding of the world, Creative development ,

Communication language and literacy, Personal, social and emotional development, Physical development and the Environment

2. There are no statistically significant differences between the English schools and the Arabic schools curricula in:

- helping to achieve the child's mathematical development
- building the child's knowledge and understanding of the world
- helping to achieve the child's creative development
- fostering the child's communication language and literacy
- helping to achieve the child's personal, social and emotional development
- helping to achieve the child's physical development
- the environment and the availability of facilities and equipment

3. There are no statistically significant differences between the English schools and the Arabic schools curricula regarding the teacher's qualifications, experience and duties, ratio of teachers to children, type of curriculum, and provision of stimulating environment.

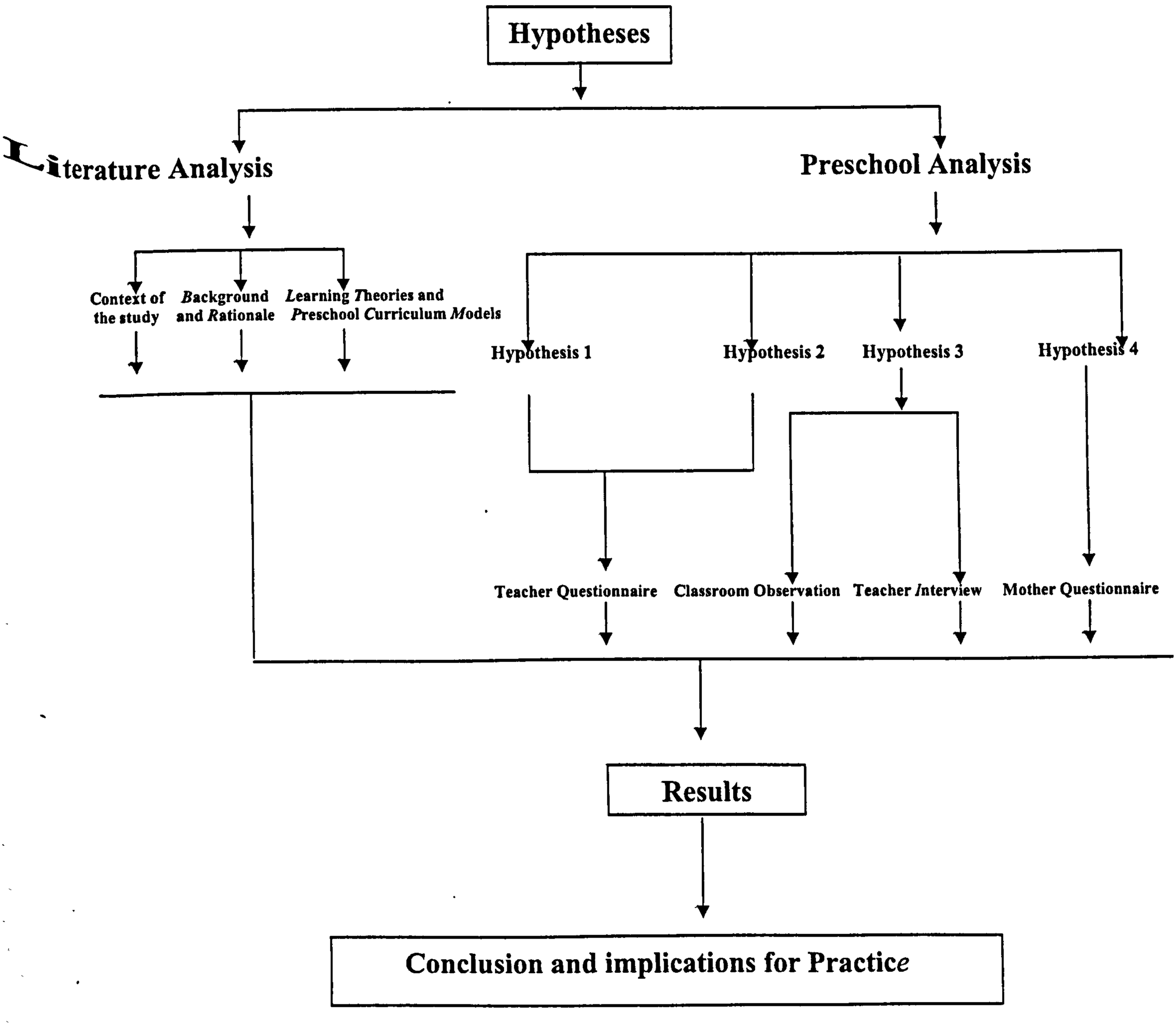
4. There are no statistically significant differences among the mothers' perceptions regarding the traditional and developmental curriculum goals, content, teaching strategies, and teachers' roles.

TEXT BOUND INTO

THE SPINE

Figure 4.1

A flow diagram summarizing the study procedures



The hypothesis the researcher tests here is the null hypothesis. The null hypothesis means "there is no significant difference." For example, if we want to test whether or not the means of two variables (x

and y) are equal, our null hypothesis is that they are equal. We'd write this as:

$$H0 : \bar{x} = \bar{y}$$

Why do we test the null hypothesis, if it is usually what we want to disprove? The reason is that it is easier to disprove a specific hypothesis (x is not, in fact, equal to y) than it is to prove a non-specific hypothesis. When we disprove the null hypothesis, we call that "rejecting the null" (or accepting the research hypothesis).

4.2 Research tools:

To test the above hypotheses, the researcher used a multi-method approach in collecting and analyzing data. Four research tools were used:

4.2.1 Teacher's questionnaire

The researcher prepared a questionnaire based on the Curriculum Guidance for the foundation stage established by the Qualifications and Curriculum Authority (QCA, 1999). Table 4.1 shows the Learning Areas of Desirable Outcomes and Early Learning Goals as set by QCA.

Questionnaires are one of the most popular methods of conducting scholarly research. It was deemed appropriate to use a questionnaire to collect information as it would allow various benefits considering the limited time and resources available.

One of the most evident advantages of written questionnaires is that they are easy to analyze, and most statistical analysis software can easily process them. The standardized questions and largely quantifiable results provided by this method also allow data to be analyzed in a relatively straightforward manner Results can be interpreted primarily in

a purely mathematical way avoiding any inferences and attempting to keep the data as "interpretation free" as possible. (see Cohen, 2000, p. 270)

Questionnaires are cost effective when compared to face-to-face interviews, mostly because of the costs associated with travel time. This is especially true for studies involving large sample sizes and large geographic areas. Written questionnaires become even more cost effective as the number of research questions increases. Furthermore, questionnaires are familiar to most people. Nearly everyone has had some experience completing questionnaires and they generally do not make people apprehensive. They are also less intrusive than telephone or face-to-face surveys. Unlike other research methods, the respondent is not interrupted by the research instrument. Another advantage is that written questionnaires reduce interviewer bias because there is uniform question presentation. Unlike in-person interviewing, there are no verbal or visual clues to influence a respondent to answer in a particular way. Many investigators have reported that interviewer voice inflections and mannerisms can bias responses (Collins, 1970). Written surveys are not subject to this bias because there is no interviewer.

On the other hand, questionnaires have some disadvantages. For example, the lack of an interviewer limits the researcher's ability to probe responses. Structured questionnaires often lose the "flavour of the response", because respondents often want to qualify their answers (Hague, 1993).

Another disadvantage is that questionnaires are simply not suited for some people. For example, a written survey to a group of poorly educated people might not work because of reading skill problems. More

frequently, some people are turned off by written questionnaires because of misuse. (Hague, 1993)

The Questionnaire consisted of two parts. The first part is a demographic survey from which data were gathered on each participant's current position (curriculum used, number of students, their age range , classroom schedule, work experience, job title, qualifications, working hours, vacation, etc) . The second part investigates to what extent the preschool curriculum in Qatar help the child's development in the seven domains of the study: mathematical development, knowledge and understanding of the world, creative development, communication language and literacy, personal, social and emotional development, physical development, and environment.

Table 4.1

Areas of Desirable Outcomes and Early Learning Goals

	Desirable Outcomes (1996)	**Early Learning Goals (1999)**
Age	For 3- to 4-year-olds	Foundation Stage: From 3 to the end of reception year
Learning area	1. Personal and social development 2. Language and literacy 3. Mathematics 4. Knowledge and understanding of the world 5. Physical development 6. Creative development	1. Personal, social, and emotional development 2. Communication, language, and literacy 3. Mathematical development 4. Knowledge and understanding of the world 5. Physical development 6. Creative development

*Source: SCAA (1996) and QCA (1999).

Each domain consists of 35-yes-no- items.. Specifically, respondents were asked to indicate if they believed the practice described in each statement was applicable in terms of their own care giving and teaching of 3- to 6-year-old children.

The self-completion approach (see Robson, 2002, p. 236) was used. Respondents filled the answers by themselves. The questionnaire was sent personally to all sample preschools and was collected a week later.

To test the hypotheses above, the researcher used Fisher's Z ratio to test the differences between proportions. (see Guilford and Fruchter 1987)

Permission to conduct the study was obtained from the Ministry of Education, specifically, from the Department of the Private Education. The questionnaire was translated into Arabic, and Qatari experts in Early Childhood Education reviewed the Arabic questionnaire. Following a pilot test, the questionnaires were administered in Qatar, by the researcher, over a two-month period from December, 2002 to January, 2003.

4.2.2 Interviews:

Face to face structured teacher interviews were developed by the researcher to provide information about the type of curriculum used in the preschools sample and to investigate to what extent teachers find the curriculum satisfactory in terms of the twelve domains shown in Table 6.8 page 243. A "categorical response" mode was adopted as it has the advantages of achieving greater uniformity of measurement and therefore

greater reliability; and of being more easily coded (see Cohen, 2000, p.p. 276-279).

Structured interview is a data-collection instrument that is used to gather data, either by telephone or face to face. In a structured interview, the evaluator asks the same questions of numerous individuals in a precise manner, offering each individual the same set of possible responses. In contrast, an unstructured interview contains many open-ended questions that are not asked in a precise, structured way. The former type of interviews has the advantages of enabling the interviewer to establish rapport with the respondent and allowing the interviewer to observe as well as listen. Moreover, it permits more complex questions to be asked than in other types of data collection and it is an effective method of gathering data when the data collection instrument contains large amount of data (see Cohen, 2002, p. 270).

Pawlas (1995) stated the following Strengths of the structured interview:

1. It enables the researcher to examine the level of Understanding a respondent has about a particular Topic - usually in slightly more depth than with a questionnaire.

2. All respondents are asked the same questions in the same way. This makes it easy to repeat ("replicate") the interview. In other words, this type of research method is easy to standardise.

3. There is a formal relationship between the researcher and the respondent with the latter knowing exactly what is required from them in the interview. If, for example, a respondent is unable or unwilling to

answer a question the researcher (because they are present at the interview) is aware of the reasons for a failure to answer all questions.

4. The researcher does not have to worry about response rates, biased (self-selected) samples, incomplete questionnaires and the like.

The participants were contacted at the preschool teachers' workplaces with an initial call to see if they would participate. During this call, a presentation of the purpose of the study and the interview was made, and time and location for the interview were decided. To ensure better control in the interview, the researcher found it important that any questions given to participants were standardised. This means that all received the same instructions and/or questions after these had been rigorously checked for ambiguity before the interview. This was done by reading the statement to participants and asking them to tell about any ambiguities they found, or any improvements they thought could be made. Participants' advice and comments were taken into consideration.

Structured interviews were performed at the preschool teachers' workplaces. Every interview started with a description of the purpose of the study and a description of ethical rules used for research, including confidentiality, consent, information, and autonomy. The researchers also emphasized that participation in the study was voluntary. The interviews, which lasted between 15 and 20 minutes, were later transcribed.

4.2.3 Classroom observations

To assess the overall quality of preschool classrooms, the researcher used *The Early Childhood Environment Rating Scale, Revised Edition (ECERS -R)*, which is an instrument authored by Harms, Clifford,

and Cryer (1998). Reliability and validity of this tool has been recognized and reinforced internationally by the number of studies that support using them as tools for assessing levels of quality in child care. (Harms, T., 1999)

The ECERS-R consists of 43 items, which are rated by a qualified observer. The 43 items are grouped into seven subscales that are named:

"Space and Furnishings", "Personal Care", "Language-Reasoning", "Activities" , "Interaction" , "Program Structure" , and "Parents and Staff."

Each item is given a 1 to 7 point rating, with each odd-numbered rating being anchored to a set of indicators. The researcher began with the indicators under the rating of 1 (which is labelled as inadequate) and continued with one item until she assigned a rating score. (A rating of 3 is labelled as "minimal," a rating of 5 is labelled as "good," and the rating of 7 is labelled as "excellent.") If indicators under an odd-numbered rating are scored "yes", then the odd-numbered rating is assigned. Even-numbered ratings are assigned when all indicators under the preceding odd-numbered rating are scored "no" and at least half of the indicators under the next odd-numbered rating are scored "yes" (Harms, et al, 1998). Regarding the instrument's validity, reliability and internal consistency see pp. 179-185.

The authors of this instrument indicated that the observations and ratings were developed to measure the quality of early childhood programs, for research or program improvement purposes (Harms, et al, 1998).

The researcher was trained by an *(ECERS –R)* expert to conduct observations and interviews during a 5-day training session followed by two practice visits.

Following an initial phone call to directors, the researcher contacted the directors again by phone to make appointments to collect data at the preschools. In each preschool, data collection began with a 2-hour classroom observation. All observations were conducted during the preschool day which starts at 6.45 and ends at 11.45 am.

Following the observation, the research arranged to interview the teachers. These interviews took place generally during the break, sometimes at the end of the day, or, if necessary, on another day. The director interviews occurred following the observations, typically in the afternoon. Every effort was made to accommodate the participants' schedules.

4.2.4 Mothers' perceptions questionnaire

Using a descriptive approach, the researcher tried to examine preschool mothers' perceptions regarding the traditional and developmental approaches for the education of their young children. The questionnaire was originally developed by Al-Maadadi (Al-Maadadi,1996) and adapted by the researcher to survey mothers' perceptions of both traditional and developmentally appropriate practices. Mothers' perceptions of preschool education in Qatar were investigated by questions regarding curriculum goals, content, teaching strategies, and teachers' roles.

Permission to conduct the study was obtained from the Ministry of Education, specifically, from the Department of the Private Education. The questionnaire was translated into Arabic, and Qatari experts in Early Childhood Education reviewed the Arabic questionnaire. Following a pilot test, the questionnaires were administered in Qatar, by the researcher, over a two-month period from December, 2002 to January, 2003.

Public and private schools in Qatar open in September. During the first month that school is open, the teaching staff, administrative offices, and the ministry of Education are busy working with administrative concerns. In fact, preschool enrolment may not be settled for the first month of the school year. Acceptable rates for surveys by academic organizations typically range between 20 percent and 33 percent of the sample (Brehm, 1993, p. 16-17). In order to limit the number of non-response problems, data collection began in mid-December.

In order to ensure confidentiality in collecting data, the researcher used a coding technique. Before distributing the questionnaire, each questionnaire was coded for follow-up purposes. A different letter of the alphabet was assigned to each preschool. Each child was represented by his school record number. The child's number and the school's letter appeared on the cover page of the questionnaire.

The researcher scheduled meetings with each principal from the seventeen selected preschools to explain the purpose of the study and to obtain the roster of children's names. The researcher explained to the principals the technique of choosing children from the roster based on random sampling. Subsequently, each principal was given the

questionnaires and the list of the code numbers of the children for questionnaire distribution and follow-up contact of non-responding mothers ten days after distribution of the questionnaires. Each school's administration office asked teachers to distribute the questionnaires to ensure that each mother received the questionnaire. Questionnaires were placed in the children's book bags or given to drivers or the person who picked the child up from school.

A letter from the researcher was attached to each questionnaire, encouraging the mothers to cooperate and return the completed questionnaires to the school. The researcher also called the principals, requesting that they personally monitor collection of the questionnaires. The researcher gave the administration offices all incomplete questionnaires for return to the mothers.

Ten days after the initial distribution of the questionnaire, letters with additional copies of the questionnaire enclosed were given to the children of non respondents to take home to their mothers. These letters emphasized the importance of returning the questionnaire. All the original 50 questionnaires distributed were completed and returned yielding a total response of 100 percent. Once the questionnaires were completed and returned to the researcher, they were given to a data entry specialist.

4.3 Population and Sample:

4.3.1 Teacher's questionnaire sample:

The total number of preschools in Qatar was 82 preschools with 44 (53.6%) Arabic speaking schools and 38 (47.4%) English speaking

schools. The sample schools consisted of 48 schools, 36 Arabic speaking schools and 12 English speaking schools. The sample represents 59% of preschools in Qatar.

Participants were 107 teachers, 81 Arabic preschool teachers and 26 English preschool teachers. Schools and teachers were randomly selected.

The researcher used a multistage sampling procedure to determine the study population (Fowler, 1993). The multistage sampling procedure uses a two-step strategy. The first step was to select the preschools. Simple random sampling was used to select the 48 preschools.

The second step was to select an adequate sample population from within those 48 preschools. Using the Table of Random Digits, a set of randomly assorted numbers (McMillan & Schumacher (1989), 107 teachers, 81 Arabic preschool teachers and 26 English preschool teachers were selected resulting in the final sample.

4.3.2 Classroom observation Sample

1- Selection of preschools

The sample that was randomly selected for observation consisted of 17 preschools, 9Arabic speaking schools and 8 English speaking schools. These schools represented 21% of preschools in Qatar. The preschools were located in Doha, Rayyan, Garrafa and Khuratiyat areas. All these preschools were licensed and supervised by the Ministry of

Education. The communities share certain features, including a mix of high-, middle- and low-income neighbourhoods.

2. Selection of classrooms

A sample of 34 classrooms was observed in these preschools, two in each school (nursery and reception classes). The classrooms were randomly selected for observations (see McMillan & Schumacher (1989),.

4.3.3 Interview sample: .

To collect more in-depth information, the researcher chose to interview the head or lead teacher in each classroom because such staff typically set the tone and style for classroom activities and interactions. The researcher used random sampling to select teachers. In the 34 observed classrooms, 34 teaching staff were observed and interviewed, 17 Nursery and 17 head teachers in the schools selected. Teachers' sample consisted of 18 Arabic speaking preschool teachers and 16 English speaking preschool teachers.

The researcher interviewed the director of each preschool to ensure that a person with an overview of centre operations and access to centre records could provide details about salaries, turnover, and staff qualifications. Directors' job definitions varied depending on the size and structure of each preschool. In some cases, directors or assistant directors worked in the classroom along with performing administrative functions; in others, the director's role involved minimal classroom contact and focused primarily on administrative tasks.

4.3.4 Mother's questionnaire sample:

Qatari mothers were used as respondents in this study because they are the primary care givers in the Qatari culture. The study population was drawn from Qatari mothers whose three- to six-year-old children were enrolled in private Arabic preschools in Qatar. According to the Annual Report of 2002/2003, published by the Ministry of Education, there are 44 private Arabic preschools. There are 3,581Qatari children and 1, 145 non-Qatari children enrolled in private Arabic schools. The total enrolment is 4,726 children (See Table 4.2).

The study focuses on mothers of preschool children in Doha, the capital of Qatar. The city of Doha was chosen as a cluster for sampling purposes because 38 of the 44 Arabic private preschools in Qatar are located in the city of Doha. As shown in Table 4.2, the number of children enrolled in rural areas represents a very small population compared to that in the urban area.

The Annual Report of 2002/2003, published by the Qatari Ministry of Education, reports the number of private Arabic preschools, which indirectly reflects the number of mothers eligible for the study.

Since there is neither an adequate list of preschool mothers nor any way to reach the population directly, the researcher used a multistage sampling procedure to determine the study population (Fowler, 1993). This was judged to be the optimal sampling approach because: (1) a larger sampling would be expensive and impractical, and (2) a smaller sample would yield more sampling error.

The multistage sampling procedure uses a two-step strategy. The first step was to select the preschools. Simple random sampling was used

to select 17 preschools, half of the 38 preschools in the city of Doha (Table 4.3). These 17 schools had a total enrolment of 2080 children.

The second step was to select an adequate sample population from within those preschools. Only 896 were of a postsecondary educational level. Of these, 368 were involved in the preschool activities and made regular visits to their children's preschools. Using the Table of Random Digits, a set of randomly assorted numbers (McMillan & Schumacher (1989), 50 of these mothers were selected resulting in the final sample.

A questionnaire was developed to examine mothers' perceptions regarding the education of their preschool children. The researcher developed a questionnaire entitled "Opinions of the Mothers of Preschool Children Regarding Preschool Education for their Children." For categorization, questionnaire items were based on two concepts: Developmental Orientation and Traditional Academic Orientation.

The questionnaire is composed of two parts. The first part contains demographic information, including the name of the child's school; the child's sex and enrolment status (nursery or kindergarten), the mother's educational level, and occupational background. The second part of the questionnaire focuses on the mothers' "perceptions of traditional and developmental practices.

A Likert Scaling technique was used on the second part of the questionnaire. Scaled items are closed statements followed by a scale range. The rating scale utilized was the following: the highest rating was "5 " for "strongly agree," "4" for "agree", "3" for "undecided," "2" for "disagree," and "1" for "strongly disagree." Therefore, the closer an item

score is to 5, the more traditionally or developmentally appropriate the response. Figure I illustrates the scoring.

Table 4.2

Preschools and Enrolment in Qatar (2002-2003)

Location	Number of schools	Qatari Children	Non-Qatari children	Total of children
Doha	38	3259	1002	4261
Other areas	6	322	143	465
Total	44	3581	1145	4726

Figure 4.1

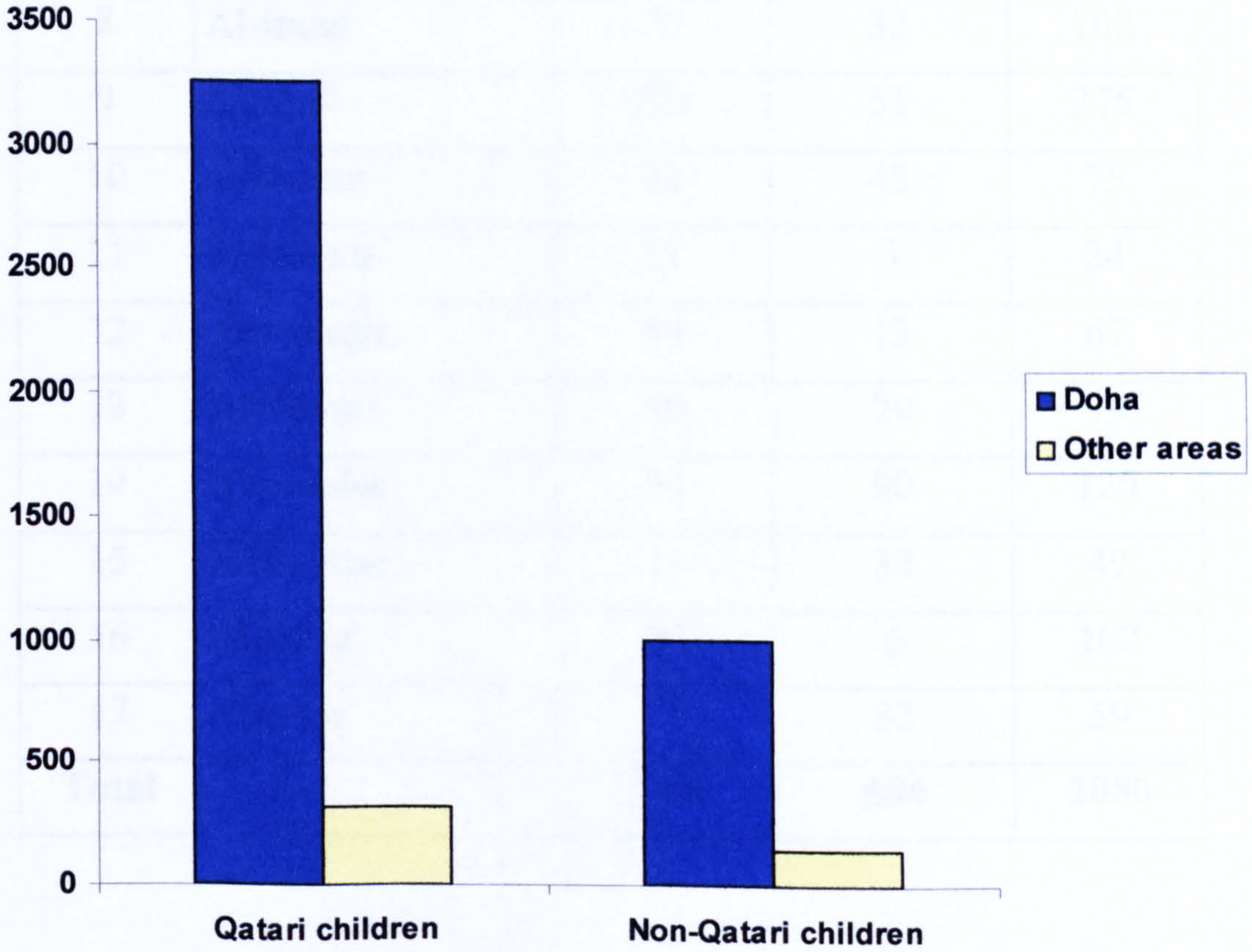


Table 4.3

Enrolment of Oatari and Non-Qatari Children in Doha City Private Arabic Preschools

Number	School Names	Qatari Children	Non-Qatari Children	Total
I	**Alnoor-Almonser**	53	11	64
2	**Nor-almaref**	131	69	200
3	**Almontaza**	194	28	222
4	**Alfaisal**	37	43	80
5	**Alnaseria**	236	45	281
6	**Alsalam**	145	12	157
7	**Alwatan**	85	39	124
8	**Al-iman**	70	32	102
9	**Alhilal**	224	51	275
10	**Albostan**	32	43	75
11	**Alnoman**	21	3	24
12	**New-Fajir**	54	13	67
13	**Alkhloud**	50	29	79
14	**Alandalos**	30	90	120
15	**Alkhritiat**	11	38	49
16	**Alaaksa**	96	6	102
17	**Alnaser**	27	32	59
Total		**1496**	**584**	**2080**

Table 4.4

The Scale Rating for Traditional and Developmental Items of the Questionnaire

	strongly disagree	disagree	undecided	agree	strongly agree
items	1	2	3	4	5

The questionnaire included 40 items: 18 traditional items and 22 developmental items. Table 4.5 shows the number of traditional and developmental items in each category of the curriculum

A review of the literature reveals positive evidence for both school and home as potential avenues to improve children's education, therefore, the categories used in this study were selected to measure mothers' perceptions regarding both. The home is regarded as a setting where the child processes his informal learning with his/her family members.

Table 4.5

The number of traditional and developmental items in each category of the curriculum

No.	Category	Developmental Items	Traditional Items	Total
1	Curriculum goals	4	6	10
2	Curriculum content	5	5	10
3	Teaching strategies	5	5	10
4	Teacher's roles	4	6	10
Total		**18**	**22**	**40**

Questions in the second part of the questionnaire address mothers' perceptions regarding the extent to which they agree or disagree with the developmental appropriateness of items in four categories: a) the curriculum goals (10 items); b) curriculum content (10 items), c) teaching strategies used in preschool program (10 items), and d) teachers' roles in preschool programs (10 items). Table 4 shows the number of developmental and traditional items in each category. Developmental and traditional items were interspersed in all categories without pattern in order to encourage the respondents to assess each item individually.

4.4 Validity of research tools:

To validate the teacher's questionnaire, the researcher administered the seven parts with a sample that consisted of 8 preschool teachers in Qatar. Correlation coefficients were calculated between the total score of each part and the total score of each other part, and the total score of the whole questionnaire as indices of the internal consistency for each part. Table 4.6 shows these correlation coefficients.

Table 4.6 shows that all the coefficients are statistically significant which proves that all the parts of the questionnaire are internally consistent. On the other hand, the questionnaire was given to seven professors from different educational specialization (educational psychology, methods of teaching, and curricula) as jurors. An item was retained where six jurors stated that it is related to its part. All items were retained.

Regarding the validity of the interview and class observation instruments, the instruments were given to the same juries who considered them valid.

The original version of the ECERS has been demonstrated to have good predictive validity indicating that quality of centre-based child care (measured using the ECERS-R) was related to preschool children's concurrent cognitive and socio-emotional development (measured using the Peabody Picture Vocabulary Test-Revised and the Woodcock-Johnson Tests of Achievement-Revised). (Harms, T., 1999)

Table 4.6

Correlation coefficients between the total score of each part and the total score of each other part, and the total score of the whole teacher's questionnaire

Domain	2	3	4	5	6	7	Total
1.	0.681	0.615	0,680	0.528	0.627	0.316	0.815
2.		0.723	0.500	0.511	0.576	0.243	0.777
3.			0.572	0.547	0.571	0.430	0.838
4.				0.532	0.572	0.313	0.772
5.					0.568	0.382	0.737
6.						0.357	0.796
7.							0.610

All correlations are significant (*p < 0.01)

Validity of the mother's questionnaire was established by both face validity and content validity.

Face validity is defined as "judgment that the items of the questionnaire appear to be relevant", while content validity is "the degree to which the sample of the test items represents the content that test is designed to measure" (McMillan & Schumacher, 1989, p.250). Content validity for the study questionnaire was established through use of a panel of experts study. The questionnaire items of this study were developed by the researcher based on the review of the literature, a review of the content of the Ministry's established curriculum, and a review of the Developmentally Appropriate Practice in Early Childhood Programs (NAEYC, 1993). The validity of these documents is well accepted, specifically with regard to the criteria for determining whether practices are developmentally appropriate. The position statement entitled "Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age Eight" (Bredekamp, 1987) was developed over a three-year period with review and comment from hundreds of early childhood professionals and through debate by the entire National Association for Early Young Children Governing Board. More than 175,000 copies of the book been distributed and the developmentalist perspective of the document is considered to reflect the consensus position of the early childhood profession. (Bredekamp, 199 1, p. 203).

The curriculum of the Ministry of Education in Qatar is based on extensive studies of curricula in neighbouring countries that have adopted the experiential approach reflected in the curriculum. Further, most of the literature reviewed consisted of dissertation documents and empirical studies, which were extensively researched. These include Heaston

(1991), Miles (1991), Bryant et al. (1991), Nashif (1985), Burrett (1961), and Charlesworth et al. (1993). Traditional items on the survey were selected based on Bereiter and Engelmann's Approach (1966) and traditional Qatar first grade textbooks which are valued for the preparation for formal public school.

Content validity was established by a panel of experts. The English version of the questionnaire was submitted to three professors who specialize in Child and Family Studies in the University of Qatar for their evaluation.

The three professors compared the questionnaire items to the Qatari curriculum to determine that the questionnaire accurately reflected the curriculum content. Two specialists in the Arabic language also were given the Arabic version of the questionnaire to ensure the sensitivity of language, clarity, and appropriateness of words. Revisions were made based on the comments and recommendations suggested to improve the instrument prior to the pilot testing.

After face and content validity had been established, the researcher utilized a pilot testing procedure to test the clarity of the questionnaire's directions and items, the item order, and the questionnaire's difficulty and length.

The "Opinions of the Mothers of Preschool Children Regarding Preschool Education for Their Children" questionnaire was pilot-tested by sending 20 copies of the questionnaire, with cover pages attached, and administered randomly to preschool mothers by the principals of preschools in Qatar. The mothers were asked to answer all questionnaire items and comment on problems encountered while responding to the questionnaire. Based on mothers' comments, modifications were made to

the instrument before administering it to the study population. These twenty pilot questionnaires were not included in the study results.

Five of the returned pilot questionnaires contained recommendations to have the demographic information on the first page and labelled as "Part I" Comments included recommendations to add examples on items 5 and 8 in the Goals category, items 1and 4 in the Content category and item 10 in the Teaching Strategies category. Some words were changed for clarity. A final revision was made and submitted to Arab experts to ensure that the Arabic language used was clear and appropriate before the questionnaire was distributed to the actual respondents.

4.5 Reliability of Research Tools

Reliability is the level of internal consistency or stability of a measuring device over time (Borg & Gall, 1989, p.257). The Cronbach Alpha is, typically used to assess the reliability of the questionnaire and is the most appropriate technique for survey research where a range of answers is possible for each item. It is used to administer one instrument and correlate the items to each other (McMillan and Schumacher, 1989, p. 248).

The teacher's questionnaire was given to a sample of 8 preschool teachers. Alpha coefficients were calculated for each of the seven parts of the questionnaire. Reliability (alpha) indices were 0.824, 0.868, 0.884, 0866, 0.870, 0.883, 0.909 respectively for the seven parts. It is noted that all the indices are relatively high which indicates that all the parts of the questionnaire are reliable.

To ensure the reliability of class observation instrument, the instrument was conducted on a random selection of 4 preschools, indicating the correlation coefficient 0.80, which indicates that all the parts of the instrument are reliable.

Harms, Thelma and Debby Cryer (1999) state that internal consistency (Cronbach's alpha) ranged from .71 to .88 at the subscale level; the total scale internal consistency was .92. (2) Inter-observer reliability was .92 (Pearson correlation) and .87 (Spearman correlation)

Concerning the mother's questionnaire, using Cronbach Alpha, the reliability coefficient for the "Opinions of the Mothers of Preschool Children Regarding Preschool Education for their Children" questionnaire was $\alpha = .93$

The reliability coefficient for the four categories of the questionnaire also was calculated using the Cronbach technique. The reliability coefficient for Curriculum Goals was $\alpha = .77$, for Curriculum Content was $\alpha = .74$, for Teaching Strategies was $\alpha = .73$, for Teacher's Roles was $\alpha = .68$, using Cronbach's Alpha. The range of the alpha scores extended from .68 to .77 which showed moderate internal consistency among the items in each category. As in other studies, this questionnaire showed a lack of sensitivity of the Likert Scale between "strongly agree" and "agree," or "strongly disagree" and "disagree," thus yielding the moderate scores in internal consistency. This range of reliability also could be related to the participants, since responding to this kind of questionnaire and knowledge was a new experience for mothers of pre-school children in Qatar. A review of related research has shown that parents, in general, are not familiar with theories and principles of early childhood education.

The data analysis generated by the responses was performed using the SPSS\PC statistical package software. Research Questions dealing with aspects of curriculum goals, content, teaching strategies, teacher's roles, and mothers' roles were analyzed using descriptive statistics including frequencies, percentages, means, and standard deviation. SPSS is recognized internationally for it is adequacy for simple math (arithmetic, averages, etc), its ability to perform more advanced calculations and analysis and its low cost.

Chapter four described the methodology and research methods deployed by the researcher to investigate the nature and quality of preschool curricula in Qatar. It presented and discusses the research hypothesis,, research tools, population and sample, validity and reliability of research tools. In chapter five, the results of the first and second hypotheses are described. The teachers' evaluative estimates of the child's achievement of the seven domains of the study are presented and compared.

5- CHAPTER FIVE

RESULTS OF THE TEACHERS' QUESTIONNAIRE

The purpose of chapter five is to present the results of the first and second hypotheses of the study. In particular, this chapter describes the teachers' evaluative estimates of the child's achievement of the seven domains of the study and describes the differences between the Arabic and English preschools regarding the achievement of each item in these domains.

5.1 Hypothesis One:

There are no statistically significant differences among all teachers' evaluative estimates regarding the curriculum's achievement of the child's:

A. Math development

B. Knowledge and understanding of the world

C. Creative development

D. Communication language and literacy

E. Personal, social and emotional development

F. Physical development

G. Environment

To test the first hypothesis, the researcher used Fisher's Z ratio to test the differences between the percentages of "YES" responses and "NO" responses of the study sample which consists of 107 teachers, 81

Arabic school teachers and 26 English school teachers in each of the seven domains of the questionnaire.

To test the hypotheses of the research, the researcher used Fisher's Z ratio to test the differences between proportions .Guilford and Fruchter (1987)[1] stated that when a null hypothesis is assumed with regard to two observed proportions, Fisher recommends that we use one estimate of the population variance, one from each sample proportion (P). This suggestion involves finding a weighted mean of the two sample proportions. The estimated population proportion is given by the formula:

(1) $Pe = \frac{N1p1 + N2p2}{N1 + N2}$ (Weighted mean of two sample proportion to estimate a population proportion)

The test of significance of a difference between two proportions can be made using a Z ratio. The formula for such a Z is

(2) $Z = \frac{P1-P2}{\sqrt{Pe\,qe\,((N1+N2)/(N1N2))}}$

(A Z for a difference between uncorrelated proportions)

where qe = 1-Pe.

5.1.1 The First Domain: Mathematical Development:

As for the question "Does the curriculum achieve the objective of helping the children achieve mathematical development, Table 5.1 shows the Z value estimates.

Table 5.1 shows that Z value estimates are significant except for 9 questions which are numbered 6, 15, 18, 19, 20, 22, 24, 29 & 34. This means that there are statistically significant differences between those

[1]Guilford,J.P.& Fruchter,B. (1987):Fundamental Statistics In Psychology And Education. McGraw-Hill,London. Pp 159:161.

who said “Yes” and those who said “No” on the questions dealing with achieving the goals indicated by the questions where Z value estimates are statistically significant in favour of those who said "Yes”.

Table 5.1
Percentages of " Yes" and "No" responses and Z value on "Mathematical Development

	Does the curriculum achieve the objective of helping the children:	Percentage		Z Value
		yes	no	
1	Making comparison of quantity	91.59	8.41	6.61**
2	Making reasonable estimate of small quantity	88.79	11.21	6.34**
3	Counting to find one more fewer	92.52	7.48	6.70**
4	Developing mental strategies for addition and subtraction	61.68	38.32	2.35*
5	Using large number up to 10 in contexts	90.65	9.35	6.53**
6	Using large number in context: 10p 20p 5p pound	57.01	42.99	1.44
7	Creating a pattern from shapes	95.33	4.67	6.95**
8	Making an increasing/decreasing pattern	81.31	18.69	5.49**
9	Sorting, matching and comparing	85.98	14.02	6.04**
10	Using comparative language of length	94.39	5.61	6.87**
11	Using comparative language of weight	89.72	10.28	6.43**
12	Using comparative language of capacity	83.18	16.82	5.72**
13	Sequencing events	81.31	18.69	5.49**
14	Experiencing different rates of speed	73.83	26.17	4.45**
15	Comparing different units of time	41.12	58.88	-1.81
16	Sorting into sets	87.85	12.15	6.24**
17	Rearranging and reshaping dough	90.65	9.35	6.53**
18	Describing simple properties of 3D shapes	50.47	49.53	.10
19	Describing simple properties of 2D shapes	57.94	42.06	1.62
20	Exploring reflection and symmetry	56.07	43.93	1.25
21	Recording information to make a comparison and prediction: Weather	68.22	31.78	3.54**
22	Discussing the properties of a solid and flat shape	52.34	47.66	.48
23	Using every day words to describe position	85.98	14.02	6.04**
24	Recognizing the name of the month of the year	53.27	46.73	.68
25	Finding one more or one less than a number from 1 to 10	81.31	18.69	5.49**
26	Using the following terms: Straight line, open curve, close curve	60.75	39.25	2.17*
27	Using the terms, more, less and equal	87.85	12.15	6.24**
28	Learning to count from 1 to 20	68.22	31.78	3.54**
29	Using the calendar daily	57.94	42.06	1.62
30	Naming in order the days of the week	92.52	7.48	6.70**
31	Telling the time (morning, afternoon, evening)	86.92	13.08	6.14**
32	Using words such as ‘more’ or ‘less’ to compare two numbers	86.92	13.08	6.14**
33	Using language such as ‘greater’, ‘heavier’, and lighter to compare quantities	85.98	14.02	6.04**
34	Using developed mathematical ideas and methods to solve practical problems	46.73	53.27	-.68
35	Using shapes appropriately for tasks	81.31	18.69	5.49**

*** P< 0.05 ** P< 0.01**

This indicates that 26 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar. The other 9 objectives cannot be said to be achieved or not because Z value estimates are not statistically significant.

Investigating the response frequencies of item 6 *"Using large number in context: 10p 20p 5p pound"*, 57.01% said "Yes" and 42.99% said "No". It is clear that there is no statistically significant difference between those who said “Yes” and those who said “No”. Thus this objective can’t be said to be achieved or not achieved though the frequencies of "Yes" are higher than the frequencies of "No". The same thing can be said about item 18 "*Describing simple properties of 3D shapes*", 19 "*Describing simple properties of 2D shapes*", item 20 "*Exploring reflection and symmetry*", and item 29 "*Using the calendar daily*"

Investigating the response frequencies of item 15" *Comparing different units of time* ", 41.12% said "Yes" and 58.88% said "No". It is clear that there is no statistically significant difference between those who said “Yes” and those who said “No”. Thus this objective cannot be said to be achieved or not achieved though the frequencies of "Yes" are lower than the frequencies of "No". The same thing can be said about item 22 *"Discussing the properties of a solid and flat shape"* item 24 *"Recognizing the name of the month of the year"* and item 34 " *Using shapes appropriately for tasks".*

5.1.2 The Second Domain: Knowledge and understanding of the world:

As for the question "Does the curriculum achieve the objective of helping the children develop knowledge and understanding of the world?", Table 5.2 shows the Z value estimates.

Table 5.2
Percentages of " Yes" and "No" responses and Z value on "Knowledge and understanding of the world"

	Does the curriculum achieve the objective of helping the children:	Percentage		Z Value
		Yes	No	
1	Being aware of the needs of babies and how they change when they grow	72.90	27.10	4.31**
2	Developing awareness of each persons individually	81.31	18.69	5.49**
3	Understanding that people grow older	94.39	5.61	6.87**
4	Understanding that families consist of different types of people	95.33	4.67	6.95**
5	Understanding the sequence of months and its related to birthdays	39.25	60.75	-2.17*
6	Understanding how we learn to talk	84.11	15.89	5.83**
7	Learning how people change as they grow up	78.50	21.50	5.12**
8	Naming parts of the body	99.07	.93	7.25**
9	Recognizing that living things live in a variety of habits	92.52	7.48	6.70**
10	Understanding that living things need certain conditions in which to thrive	88.79	11.21	6.34**
11	Observing change in growing plants	88.79	11.21	6.34**
12	Recording the changes in the growing blub	59.81	40.19	1.99*
13	Finding about the features of the local environment	64.49	35.51	2.88**
14	Learning about the health centre	61.68	38.32	2.35*
15	Investigating bubble mixture and bubble shapes	44.86	55.14	-1.06
16	Observing the similarities and differences between bodies and their shadows	68.22	31.78	3.54**
17	Using technology for an appropriate purpose	54.21	45.79	.87
18	Knowing about own cultures and beliefs and those of other people	67.29	32.71	3.38**
19	Finding out about past and present events	61.68	38.32	2.35*
20	Recognizing people's needs in their environments	68.22	31.78	3.54**
21	Identifying some features of living things	91.59	8.41	6.61**
22	Investigating what happens in the rain	90.65	9.35	6.53**
23	Identifying uses of every day technology	85.05	14.95	5.94**
24	Building and constructing with wide range of objects	91.59	8.41	6.61**
25	Describing what we see when we look up	89.72	10.28	6.43**
26	Understanding how things move	85.05	14.95	5.94**
27	Investigating the movement in wheeled objects	72.90	27.10	4.31**
28	Observing what happens when you whisk different mixture	78.50	21.50	5.12**
29	Sorting toys to a variety of criteria	87.85	12.15	6.24**
30	Developing the skills of designing and making	77.57	22.43	4.99**
31	Knowing his five senses	93.46	6.54	6.79**
32	Looking at similarities, differences, patterns and change	91.59	8.41	6.61**
33	Investigating objects and materials by using the appropriate senses	92.52	7.48	6.70**
34	Selecting tools and techniques to shape and assemble materials	79.44	20.56	5.25**
35	Encourage children to ask questions about why things happened and how things work	94.39	5.61	6.87**

*** P< 0.05** **** P< 0.01**

Table 5.2 shows that Z value estimates are significant except for 2 questions which are numbered 15 and 17. This means that there are statistically significant differences between those who said “Yes” and those who said “No” on the questions dealing with achieving the goals indicated by the questions where Z value estimates are statistically significant in favour of those who said "Yes”. These significant differences are in favour of those who said “Yes” in 32 questions and in favour of those who said “No” in 1 question. This indicates that 32 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar and that one objective, numbered 5, is not achieved by the pre-school curriculum in Qatar. The other 2 insignificant objectives can’t be said to be achieved or not because Z value estimates are not statistically significant.

Investigating the response frequencies of item 15 *" Investigating bubble mixture and bubble shapes"*, 44.86% said "Yes" and 55.14% said "No". It is clear that there is no statistically significant difference between those who said “Yes” and those who said “No”. Thus this objective can’t be said to be achieved or not achieved though the frequencies of "Yes" are lower than the frequencies of "No".

Investigating the response frequencies of item 17*" Using technology for an appropriate purpose "*, 54.21% said "Yes" and 45.79% said "No". It is clear that there is no statistically significant difference between those who said “Yes” and those who said “No”. Thus this

objective cannot be said to be achieved or not achieved though the frequencies of "Yes" are higher than the frequencies of "No".

5.1.3 The Third Domain: Creative Development

As for the question "Does the curriculum achieve the objective of helping the children's creative development?" Table 5.3 shows the Z value estimates.

Table 5.3
Percentages of " Yes" and "No" responses and Z value on" Creative Development "

	Does the curriculum achieve the objective of helping the children	Percentage		Z Value
		Yes	No	
1	Developing awareness of soft, loud and graduate sounds	93.46	6.54	6.79**
2	Understanding when to stop and when to start	89.72	10.28	6.43**
3	Developing voice control	86.92	13.08	6.14**
4	Developing the awareness of rhyme and musical patterns	72.90	27.10	4.31**
5	Appreciating a variety of musical styles	61.68	38.32	2.35*
6	Appreciating the work of well known composers	20.56	79.44	-5.25**
7	Developing the awareness of the way sounds are made	85.98	14.02	6.04**
8	Learning to discriminate between sounds	94.39	5.61	6.87**
9	Exploring a range of instruments	55.14	44.86	1.06
10	Practising musical skills	31.78	68.22	-3.54**
11	Developing awareness of the sounds made by different notes	17.76	82.24	-5.61**
12	Developing awareness of shapes and pattern	38.32	61.68	-2.35**
13	Exploring the textures and colours of a variety seeds and pulses	80.37	19.63	5.37**
14	Developing appreciation of art	72.90	27.10	4.31**
15	Learning about different Artists' style	23.36	76.64	-4.86**
16	Developing awareness of texture and design	69.16	30.84	3.70**
17	Understanding how materials can be joined and hardened	46.73	53.27	-.68
18	Exploring ideas and feelings through using puppets	85.98	14.02	6.04**
19	Developing imagination through stories and imaginative play	91.59	8.41	6.61**
20	Exploring ideas by acting out a familiar journey	69.16	30.84	3.70**
21	Developing awareness of seasonal changes through dance	75.70	24.30	4.73**
22	Exploring the way that animals move and behave through dance	71.96	28.04	4.16**

23	Developing emotional and creative response through music and movement	57.94	42.06	1.62
24	Developing imagination and ability to role play in a situation	77.57	22.43	4.99**
25	Learning about the fire service through imagination play	79.44	20.56	5.25**
26	Learning about role play travel agents and learning about other countries	46.73	53.27	-.68
27	Learning about hair dressing through imagination play	52.34	47.66	.48
28	Learning about working in an office through role play	44.86	55.14	-1.06
29	Learning about planting and growing seeds and plants	87.85	12.15	6.24**
30	Designing and making resources for use in imaginative play	62.62	37.38	2.53*
31	Developing imagination by using cloths and props	86.92	13.08	6.14**
32	Using every day objects imaginatively	84.11	15.89	5.83**
33	Developing enjoyment of circle dances	68.22	31.78	3.54**
34	Responding in a variety of ways to what they hear, smell, touch & feel	95.33	4.67	6.95**
35	Gaining experiences of dance patterns and working with partners	65.42	34.58	3.05**

*** P< 0.05 ** P< 0.01**

Table 5.3 shows that Z value estimates are significant except for 6 questions which are numbered 9, 17, 23, 26, 27 and 28. This means that there are statistically significant differences between those who said "Yes" and those who said "No" on the questions dealing with achieving the goals indicated by the questions where Z value estimates are statistically significant. These significant differences are in favour of those who said "Yes" in 24 questions and in favour of those who said "No" in 5 questions. This indicates that 24 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar and that five objectives ,which are numbered 6, 10, 11, 12, and 15, are not achieved by the pre-school curriculum in Qatar. The insignificant 6 objectives can't be said to be achieved or not because Z value estimates are not statistically significant.

Investigating the response frequencies of item 9 "*Exploring a range of instruments*", 55.14% said "Yes" and 44.86% said "No". It is

clear that there is no statistically significant difference between those who said “Yes” and those who said “No”. Thus this objective can’t be said to be achieved or not achieved though the frequencies of "Yes" are higher than the frequencies of "No". The same thing can be said about item 23 " *Developing emotional and creative response through music and movement* ", and item 27 " *Learning about hair dressing through imagination play*".

Investigating the response frequencies of item 17" Understanding how materials can be joined and hardened ", 46.73% said "Yes" and 53.27% said "No". It is clear that there is no statistically significant difference between those who said “Yes” and those who said “No”. Thus this objective can’t be said to be achieved or not achieved though the frequencies of "Yes" are lower than the frequencies of "No".

The same thing can be said about item 26 "*Learning about role play travel agents and learning about other countries* ", and item 28 " *Learning about working in an office through role play* ".

5.1.4 The Fourth Domain: Communication Language and Literacy

As for the question "Does the curriculum achieve the objective of helping the children develop communication language and literacy?", Table 5.4 shows the Z value estimates.

Table 5.4 shows that Z value estimates are significant except for 5 questions which are numbered 4, 5, 6, 10 and 11. This means that there are statistically significant differences between those who said “Yes” and those who said “No” on the questions dealing with achieving the goals indicated by the questions where Z value estimates are statistically significant.

Table 5.4
Percentages of " Yes" and "No" responses and Z value on" Communication Language and Literacy"

	Does the curriculum achieve the objective of helping the children	Percentage		Z Value
		Yes	No	
1	Making up their own poems using a list of words they learned	38.32	61.68	-2.35*
2	Taking turns in conversations in interacting with others	95.33	4.67	6.95**
3	Using their phonic knowledge to write simple and regular words	63.55	36.45	2.71**
4	Exploring and experimenting with word endings	58.88	41.12	1.81
5	Listening to rhymes and making up their own accordingly	47.66	52.34	-.48
6	Using languages to imagine and recreate roles and experiences	57.94	42.06	1.62
7	Writing labels and captions	35.51	64.49	-2.88**
8	Becoming to form simple sentences	57.01	42.99	1.44
9	Retelling a narrative in the correct sequence	88.79	11.21	6.34**
10	Understanding how information can be found in non-fiction texts	43.93	56.07	-1.25
11	Reading a range of familiar and common words independently	54.21	45.79	.87
12	Linking sounds to letters	88.79	11.21	6.34**
13	Showing an understanding of the elements of stories	90.65	9.35	6.53**
14	Naming and sounding the letters of the alphabet	97.20	2.80	7.10**
15	Understanding the main character of the story	94.39	5.61	6.87**
16	Hearing and saying initial and final sounds in words	81.31	18.69	5.49**
17	Writing a letter using features of letter writing	22.43	77.57	-4.99**
18	Shared reading of a big book non-fiction	34.58	65.42	-3.05**
19	Writing their own names	75.70	24.30	4.73**
20	Using full stop at the end of the sentence	59.81	40.19	1.99*
21	Sustaining attentive listening and responding to what they have heard	87.85	12.15	6.24**
22	Holding a pencil to form recognisable letters	92.52	7.48	6.70**
23	Speaking clearly with confidence	92.52	7.48	6.70**
24	Showing awareness of the listener	94.39	5.61	6.87**
25	Describing main characters in a story	85.05	14.95	5.94**
26	Reading on sight the words of appropriate difficulty	32.71	67.29	-3.38**
27	Reading on sight captions	28.04	71.96	-4.16**
28	Reading on sight labels	29.91	70.09	-3.86**
29	Developing expressive language	73.83	26.17	4.45**
30	Writing a book using specified vocabulary	28.04	71.96	-4.16**
31	Predict what might happen next in a story	71.03	28.97	4.01**
32	Discussing the differences between fiction and not fiction book	39.25	60.75	-2.17*
33	Discussing the sequence of time, encouraging whole-class participation.	68.22	31.78	3.54**
34	Understanding that English read from left to right and top to bottom	82.24	17.76	5.61**
35	Retelling events from non-fiction story	85.05	14.95	5.94**

*** P< 0.05 ** P< 0.01**

These significant differences are in favour of those who said "Yes" in 20 questions and in favour of those who said "No" in 10 questions. This indicates that 20 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar and that 10 objectives, which are numbered 1,7, 10, 17, 18, 26, 27, 28, 30, and 32, are not achieved by the pre-school curriculum in Qatar. The insignificant 5 objectives cannot be said to be achieved or not because Z value estimates are not statistically significant.

Investigating the response frequencies of item 4 " *Exploring and experimenting with word endings* ", 58.88% said "Yes" and 41.12% said "No". It is clear that there is no statistically significant difference between those who said "Yes" and those who said "No". Thus this objective can't be said to be achieved or not achieved though the frequencies of "Yes" are higher than the frequencies of "No". The same thing can be said about item 6 " *Using languages to imagine and recreate roles and experiences* ", and item 11 " *Reading a range of familiar and common words independently* ".

Investigating the response frequencies of item 5" *Listening to rhymes and making up their own accordingly* ", 47.66% said "Yes" and 52.34% said "No". It is clear that there is no statistically significant difference between those who said "Yes" and those who said "No". Thus this objective can't be said to be achieved or not achieved though the frequencies of "Yes" are lower than the frequencies of "No".

The same thing can be said about item 10 " *Understanding how information can be found in non-fiction texts* ".

5.1.5 The Fifth Domain: Personal, social and emotional development

As for the question "Does the curriculum achieve the objective of helping the children achieve personal, social and emotional development, Table 5.6 shows the Z value estimates.

Table 5.6 Percentages of " Yes" and "No" responses and Z value on" Personal, social and emotional development"

	Does the curriculum achieve the objective of helping the children:	Percentage		Z Value
		Yes	No	
1	Becoming aware of the group activities.	91.59	8.41	6.61**
2	Talking about what makes each of us unique.	71.03	28.97	4.01**
3	Learning appropriate ways of handling disagreement.	72.90	27.10	4.31**
4	Coping with changes in routines.	91.59	8.41	6.61**
5	Developing sense of belongingness in a group.	97.20	2.80	7.10**
6	Feeling proud of personal achievement.	99.07	.93	7.25**
7	Making critical choices.	52.34	47.66	.48
8	Feeling confident in leading a whole group activities.	88.79	11.21	6.34**
9	Learning to watch and imitate others.	95.33	4.67	6.95**
10	Speaking in front of a group.	91.59	8.41	6.61**
11	Learning to be still and quiet.	95.33	4.67	6.95**
12	Learning how to look and listen to group instructions.	95.33	4.67	6.95**
13	Developing concentration and memory.	93.46	6.54	6.79**
14	Being able to listen out for key information during a group story.	88.79	11.21	6.34**
15	Becoming independent when putting on a coat.	93.46	6.54	6.79**
16	Developing independently when using cutlery.	92.52	7.48	6.70**
17	Indicating clear choices when planning craft work.	75.70	24.30	4.73**
18	Managing independently in the toilet.	88.79	11.21	6.34**
19	Practising saying 'please' and 'thank you'.	93.46	6.54	6.79**
20	Taking turns with a small group of children.	94.39	5.61	6.87**
21	Practising helping people.	92.52	7.48	6.70**
22	Thinking about different ways of sharing with each other.	85.98	14.02	6.04**
23	Playing co-operatively with a partner.	96.26	3.74	7.03**
24	Using colours to illustrate feelings.	88.79	11.21	6.34**
25	Talking about friends and how to be friendly.	87.85	12.15	6.24**
26	Using movement and dance to express feelings.	80.37	19.63	5.37**
27	Developing self-esteem.	89.72	10.28	6.43**
28	Considering the feelings and wishes of other children.	85.98	14.02	6.04**
29	Learning how to give and take.	97.20	2.80	7.10**
30	Trying new activities, initiate ideas and speak in front of a group.	85.05	14.95	5.94**
31	Being interested, exited and motivated to learn.	94.39	5.61	6.87**
32	Recognizing their own needs, feelings and views.	89.72	10.28	6.43**
33	Forming good relationship with adults and peers and feel part of a group.	92.52	7.48	6.70**
34	Understanding what is right and wrong,	96.26	3.74	7.03**
35	Respecting the ideas and opinion of others.	81.31	18.69	5.49**

*** P< 0.05 ** P< 0.01**

Table 5.6 shows that Z value estimates are significant except for 1 question which is numbered 7. This means that there are statistically significant differences between those who said "Yes" and those who said "No" on the questions dealing with achieving the goals indicated by the questions where Z value estimates are statistically significant in favour of those who said "Yes". This indicates that 34 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar.

Investigating the response frequencies of item 7 " *Making critical choices* ", 52.34% said "Yes" and 47.66% said "No". It is clear that there is no statistically significant difference between those who said "Yes" and those who said "No". Thus this objective can't be said to be achieved or not achieved though the frequencies of "Yes" are higher than the frequencies of "No".

5.1.6 The Sixth Domain: Physical Development

As for the question "Does the curriculum achieve the objective of helping the children develop their physical development, Table 5.6 shows the Z value estimates.

Table 5.6 shows that Z value estimates are significant except for 6 questions which are numbered 4, 21, 28, 29, 30 and 31. This means that there are statistically significant differences between those who said "Yes" and those who said "No" on the questions dealing with achieving the goals indicated by the questions where Z value estimates are statistically significant in favour of those who said "Yes". This indicates that 29 out of the 35 objectives of this domain are being achieved by the

pre-school curriculum in Qatar. The other 6 objectives can't be said to be achieved or not because Z value estimates are not statistically significant.

Table 5.6

Percentages of "Yes" and "No" responses and Z value on" Physical Development"

	Does the curriculum achieve the objective of helping the children:	Percentage		Z Value
		Yes	No	
1	Moving with confidence and imagination to an action song	83.18	16.82	5.72**
2	Manipulating small objects with control	84.11	15.89	5.83**
3	Handling tools, objects and equipment with increasing control	77.57	22.43	4.99**
4	Handling instruments with confidence	55.14	44.86	1.06
5	Using balancing and climbing equipment	68.22	31.78	3.54**
6	Moving and using space with confidence	92.52	7.48	6.70**
7	Raising health awareness of the dangers of too much sun	77.57	22.43	4.99**
8	Showing awareness of hygiene	95.33	4.67	6.95**
9	Recognizing that changes happen to their bodies when they are active	76.64	23.36	4.86**
10	Using tools and wood safely and with increasing control	74.77	25.23	4.59**
11	Using tools and small equipment with confidence	77.57	22.43	4.99**
12	Moving under, around and through equipment	77.57	22.43	4.99**
13	Moving in a team and use space with confidence	86.92	13.08	6.14**
14	Using malleable materials with safety and control	70.09	29.91	3.86**
15	Developing cutting and sticking skills	95.33	4.67	6.95**
16	Moving confidently through hoops	88.79	11.21	6.34**
17	Coping a pattern of movement	88.79	11.21	6.34**
18	Showing awareness of space, of themselves and others	81.31	18.69	5.49**
19	Carrying a cup filled with water from one place to the other located 3 meter away without spilling.	70.09	29.91	3.86**
20	Walking around a four circle without stepping off the line	65.42	34.58	3.05**
21	Handling bats and balls with increasing control	56.07	43.93	1.25
22	Developing hand-eye-coordination	85.98	14.02	6.04**
23	Aiming at a target	71.96	28.04	4.16**
24	Handling construction toys with increasing control	90.65	9.35	6.53**
25	Building towers and bricks	88.79	11.21	6.34**
26	Threading beads in a pattern of colours	79.44	20.56	5.25**
27	Balancing on a bench and jump onto a mat	78.50	21.50	5.12**
28	Exploring the concept of being upside down	50.47	49.53	.10
29	Developing balance using skipping rope	53.27	46.73	.68
30	Assembling and baking tart	43.93	56.07	-1.25
31	Using plasticine to produce three dimensional picture	54.21	45.79	.87
32	Walk heel-to-toe for four or more steps along a line	63.55	36.45	2.71**
33	Standing on one foot for five seconds	78.50	21.50	5.12**
34	Hop on one foot for ten seconds	74.77	25.23	4.59**
35	Recognizing the importance of being healthy	90.65	9.35	6.53**

*** P< 0.05 ** P< 0.01**

Investigating the response frequencies of item 4 " *Handling instruments with confidence* ", 55.14% said "Yes" and 44.86% said "No". It is clear that there is no statistically significant difference between those who said “Yes” and those who said “No”. Thus this objective can’t be said to be achieved or not achieved though the frequencies of "Yes" are higher than the frequencies of "No".

The same thing can be said about item 21 " *Handling bats and balls with increasing control* ", item 28 "*Exploring the concept of being upside down*" item 29 " *Developing balance using skipping rope"* and item 31 "*Using plasticine to produce three dimensional picture*".

Investigating the response frequencies of item 30 " *Assembling and baking tart"*, 43.93% said "Yes" and 56.07% said "No". It is clear that there is no statistically significant difference between those who said “Yes” and those who said “No”. Thus this objective can’t be said to be achieved or not achieved though the frequencies of "Yes" are lower than the frequencies of "No".

5.1.7 The Seventh Domain: The Environment

As for the question "What facilities and equipment are available at these preschools", Table 5.7 shows the Z value estimates.

Table 5.7 shows that Z value estimates are significant except for 15 questions which are numbered 1, 9, 12, 13, 17, 18, 19, 21, 22, 26, 27, 28, 30, 34 and 35.

Table 5.7
Percentages of " Yes" and "No" responses and Z value on" The Environment"

	Are the following facilities and equipment available or not?	Percentage		Z value
		Yes	No	
1	A 10 metre square of usable playroom floor space per child	42.99	57.01	-1.44
2	A 25 metre square play space outdoors per child	61.68	38.32	2.35*
3	Arranging space to facilitate small or large activities	85.05	14.95	5.94**
4	The activity area including block building	85.05	14.95	5.94**
5	Sociodramatic play area	63.55	36.45	2.71**
6	Art area	65.42	34.58	3.05**
7	Music area	35.51	64.49	-2.88**
8	Science area	39.25	60.75	-2.17*
9	Math area	45.79	54.21	-.87
10	Manipulative games area	71.96	28.04	4.16**
11	Quiet book, reading and writing area	83.18	16.82	5.72**
12	Sand and water area	58.88	41.12	1.81
13	Woodworking area	43.93	56.07	-1.25
14	Carpet area	86.92	13.08	6.14**
15	Individual space for children to store their belongings	90.65	9.35	6.53**
16	Low open shelves	85.05	14.95	5.94**
17	Indoor private area	56.07	43.93	1.25
18	Outdoor private area	41.12	58.88	-1.81
19	Soft elements in the environment such as rugs, cushions, rocking chairs	51.40	48.60	.29
20	Outdoor flat sections	84.11	15.89	5.83**
21	Outdoor sand	56.07	43.93	1.25
22	Outdoor grass	55.14	44.86	1.06
23	Outdoor hard areas for wheel toys	75.70	24.30	4.73**
24	Outdoor shaded area	88.79	11.21	6.34**
25	Outdoor open area	82.24	17.76	5.61**
26	Outdoor digging space	42.06	57.94	-1.62
27	Variety of digging equipment	42.99	57.01	-1.44
28	Variety of riding equipment	58.88	41.12	1.81
29	Outdoor climbing equipment	62.62	37.38	2.53*
30	Balancing equipment	56.07	43.93	1.25
31	Outdoor area surrounded by fences	65.42	34.58	3.05**
32	A senior staff is in charge of a full day programme	86.92	13.08	6.14**
33	Renewal the licenses of the pre-school yearly	79.44	20.56	5.25**
34	A pre-school person for all time knows First Aid Kit	53.27	46.73	.68
35	In a field trip a person who knows CPR and First Aid Kit	49.53	50.47	-.10

*** P< 0.05** **** P< 0.01**

This means that there are statistically significant differences between those who said "Yes" and those who said "No" on the questions

dealing with achieving the goals indicated by the questions where Z value estimates are statistically significant. These significant differences are in favour of those who said "Yes" in 18 questions and in favour of those who said "No" in 2 questions. This indicates that 18 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar and that 2 objectives, which are numbered 7and 8, are not achieved by the pre-school curriculum in Qatar. The insignificant 15 objectives can't be said to be achieved or not because Z value estimates are not statistically significant.

Investigating the response frequencies of item 1" *A 10 metre square of usable playroom floor space per child* ", 42.99% said "Yes" and 57.01% said "No". It is clear that there is no statistically significant difference between those who said "Yes" and those who said "No". Thus this objective can't be said to be achieved or not achieved though the frequencies of "Yes" are lower than the frequencies of "No". The same thing can be said about item 9 " *Math area* ", item 13 " *Woodworking area* " item 18 " *Outdoor private area* ", item 26 " *Outdoor digging space*", item 27 " *Variety of digging equip*ment" and item 35 " *In a field trip a person who knows CPR and First Aid Kit*".

Investigating the response frequencies of item 12 "*Sand and water area* ", 58.88% said "Yes" and 41.12% said "No". It is clear that there is no statistically significant difference between those who said "Yes" and those who said "No". Thus this objective can't be said to be achieved or not achieved though the frequencies of "Yes" are higher than the frequencies of "No". The same thing can be said about item 17 " *Indoor private area* ", item 19 " *Soft elements in the environment such as rugs, cushions, rocking chairs* " item 21 " *Outdoor sand* ", item 22 " *Outdoor grass* ", item 28 " *Variety of riding equipment* ", item 30 " Balancing

equipment" and item 34 " *A pre-school person for all knows First Aid Kit*".

5.2 Hypothesis Two:

There are no statistically significant differences between the English schools and the Arabic schools curriculums in:

A. helping to achieve the child's mathematical development

B. building the child's knowledge and understanding of the world

C. helping to achieve the child's creative development

D. fostering the child's communication language and literacy

E. helping to achieve the child's personal, social and emotional development

F. helping to achieve the child's physical development

G. the environment and the availability of facilities and equipment

To test the second hypothesis, the researcher used Fisher's Z ratio to test the differences between the percentages of "YES" responses of the Arabic Preschool teachers and "YES" responses of the English Preschool teachers in each of the seven domains of the questionnaire.

5.2.1 The First Domain: Mathematical Development:

Regarding the achievement of mathematical development, Table 5.8 shows the Z value estimates.

Table 5.8
The differences between the percentages of " Yes" responses of the two samples on" Mathematical Development"

	Does the curriculum achieve the objective of helping the children:	Percentage of " Yes"		Z Value
		Arabic	English	
1	Making comparison of quantity	90.12	96.15	-.73
2	Making reasonable estimate of small quantity	86.42	96.15	-1.06
3	Counting to find one more fewer	90.12	100.00	-1.25
4	Developing mental strategies for addition and subtraction	56.79	76.92	-1.83
5	Using large number up to 10 in contexts	92.59	84.62	.93
6	Using large number in context: 10p 20p 5p pound	61.73	42.31	1.83
7	Creating a pattern from shapes	93.83	100.00	-.95
8	Making an increasing/decreasing pattern	81.48	80.77	.07
9	Sorting, matching and comparing	82.72	96.15	-1.36
10	Using comparative language of length	95.06	92.31	.39
11	Using comparative language of weight	91.36	84.62	.76
12	Using comparative language of capacity	81.48	88.46	-.67
13	Sequencing events	77.78	92.31	-1.37
14	Experiencing different rates of speed	77.78	61.54	1.45
15	Comparing different units of time	35.80	57.69	-2.54*
16	Sorting into sets	85.19	96.15	-1.16
17	Rearranging and reshaping dough	91.36	88.46	.34
18	Describing simple properties of 3D shapes	50.62	50.00	.06
19	Describing simple properties of 2D shapes	51.85	76.92	-2.34*
20	Exploring reflection and symmetry	53.09	65.38	-1.17
21	Recording information to make a comparison and prediction: Weather	70.37	61.54	.79
22	Discussing the properties of a solid and flat shape	50.62	57.69	-.70
23	Using every day words to describe position	85.19	88.46	-.33
24	Recognizing the name of the month of the year	45.68	76.92	-3.02**
25	Finding one more or one less than a number from 1 to 10	82.72	76.92	.54
26	Using the terms: Straight line, open curve, close curve	59.26	65.38	-.56
27	Using the terms, more, less and equal	88.89	84.62	.45
28	Learning to count from 1 to 20	62.96	84.62	-1.92
29	Using the calendar daily	53.09	73.08	-1.87
30	Naming in order the days of the week	91.36	96.15	-.61
31	Telling the time (morning, afternoon, evening)	88.89	80.77	.84
32	Using words such as 'more' or 'less' to compare two numbers	87.65	84.62	.31
33	Using language such as 'greater', 'heavier', and lighter to compare quantities	88.89	76.92	1.21
34	Using developed mathematical ideas and methods to solve practical problems	39.51	69.23	-3.11**
35	Using shapes appropriately for tasks	79.01	88.46	-.89

*** P< 0.05** **** P< 0.01**

Table 5.8 shows that Z value estimates are not significant for 31 questions. This indicates that there are no statistically significant differences between the two samples on 31 out of the 35 objectives of

this domain although the percentages of "Yes" show a clear difference on many questions. The Table shows that the English preschools score higher percentages than the Arabic preschools on 20 out of the 35 questions in this domain.

The data shows significant differences in 4 out of the 35 objectives of the questionnaire. These are numbered 15, 19, 24, and 34.

Investigating the response frequencies of item 15 *" Comparing different units of time "*, 35.80% of the Arabic sample and 57.69% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at P= -2.54* in favour of the English sample. Thus it is obvious that while Arabic schools do not achieve this objective English school do but to a very limited extent. The same thing can be said about item 19 ""*Describing simple properties of 2D shapes*", item 24 *" Recognizing the name of the month of the year"* , and item 34 " *Using developed mathematical ideas and methods to solve practical problems* "

Table (8) also shows that Arabic schools score low percentages (less than 60%) on items: 4, 18, 20, 22, 26, and 29. This indicates that the Arabic preschools achieve these objectives to a very limited extent. On the other hand, the English preschools score low percentages (less than 60%) on items: 6, 18 and 22. It is noticed that both types of schools share a low percentages in achieving the objectives 18 " *Describing simple properties of 3D shapes*" and 22 *"Discussing the properties of a solid and flat shape"*.

5.2.2 The Second Domain: Knowledge and understanding of the world:

Regarding the achievement of Knowledge and understanding of the world, Table 5.9 shows the Z value estimates.

Table 5.9
The differences between the percentages of " Yes" responses of the two samples on" Knowledge and understanding of the world "

	Does the curriculum achieve the objective of helping the children:	Percentage of " Yes"		Z Value
		Arabic	English	
1	Being aware of the needs of babies and how they change when they grow	67.90	88.46	-1.83
2	Developing awareness of each persons individually	77.78	92.31	-1.37
3	Understanding that people grow older	97.53	84.62	1.86
4	Understanding that families consist of different types of people	95.06	96.15	-.17
5	Understanding the sequence of months and its related to birthdays	29.63	69.23	-4.54**
6	Understanding how we learn to talk	91.36	61.54	2.96**
7	Learning how people change as they grow up	77.78	80.77	-.27
8	Naming parts of the body	98.77	100.00	-.41
9	Recognizing that living things live in a variety of habits	97.53	76.92	2.67**
10	Understanding that living things need certain conditions in which to thrive	88.89	88.46	.05
11	Observing change in growing plants	92.59	76.92	1.72
12	Recording the changes in the growing blub	60.49	57.69	.26
13	Finding about the features of the local environment	64.20	65.38	-.11
14	Learning about the health centre	67.90	42.31	2.33*
15	Investigating bubble mixture and bubble shapes	37.04	69.23	-3.45**
16	Observing the similarities and differences between bodies and their shadows	75.31	46.15	2.59**
17	Using technology for an appropriate purpose	51.85	61.54	-.94
18	Knowing about own cultures and beliefs and those of other people	67.90	65.38	.22
19	Finding out about past and present events	62.96	57.69	.48
20	Recognizing people's needs in their environments	72.84	53.85	1.69
21	Identifying some features of living things	95.06	80.77	1.74
22	Investigating what happens in the rain	92.59	84.62	.93
23	Identifying uses of every day technology	88.89	73.08	1.58
24	Building and constructing with wide range of objects	92.59	88.46	.50

25	Describing what we see when we look up	92.59	80.77	1.33
26	Understanding how things move	90.12	69.23	2.09*
27	Investigating the movement in wheeled objects	75.31	65.38	.88
28	Observing what happens when you whisk different mixture	87.65	50.00	3.49**
29	Sorting toys to a variety of criteria	85.19	96.15	-1.16
30	Developing the skills of designing and making	74.07	88.46	-1.31
31	Knowing his five senses	93.83	92.31	.20
32	Looking at similarities, differences, patterns and change	91.36	92.31	-.11
33	Investigating objects and materials by using the appropriate senses	95.06	84.62	1.33
34	Selecting tools and techniques to shape and assemble materials	83.95	65.38	1.71
35	Encourage children to ask questions about why things happened and how things work	95.06	92.31	.39

* P< 0.05 ** P< 0.01

Table 5.9 shows that Z value estimates are not significant for 27 questions. This indicates that there are no statistically significant differences between the two samples on 27 out of the 35 objectives of this domain although the percentages of "Yes" show a clear difference on many questions. The Table shows that the Arabic preschools score higher percentages than the English preschools on 24 out of the 35 questions in this domain.

The Table shows significant differences in 8 out of the 35 objectives of the questionnaire. These are numbered 5, 6,9,14,15,16,26 and 28.

Investigating the response frequencies of item 5 " *Understanding the sequence of months and its related to birthdays* ", 29.63% of the Arabic sample and 69.23% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at -4.54* in favour of the English sample. Thus it is obvious that while Arabic preschools don't achieve this objective English preschools do. The same thing can be said about item 15 " *Investigating bubble mixture*

and bubble shapes". On the other hand, the sign cant differences were in favour of the Arabic preschools in six items of this domain which are numbered 6,9,14, 16,26 and 28.

Investigating the response frequencies of item 6 *" Understanding how we learn to talk ",* 91.36% of the Arabic sample and 61.54% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at P= -4.54* in favour of the Arabic sample. Thus it is obvious that the English preschools don't achieve this objective to the extent that the Arabic preschools do. The same thing can be said about item 9 " *Recognizing that living things live in a variety of habits",* item 14 *"Learning about the health centre",* item 16 *" Observing the similarities and differences between bodies and their shadows* ", item 26 *" Understanding how things move ",* and item 28 *"Observing what happens when you whisk different mixture".*

5.2.3 The Third Domain: Creative Development

Regarding the achievement of creative development, Table 5.10 shows the Z value estimates.

Table 5.10 shows that Z value estimates are not significant for 27 questions. This indicates that there are no statistically significant differences between the two samples on 27 out of the 35 objectives of this domain although the percentages of "Yes" show a clear difference on many questions. The Table shows that the English preschools score higher percentages than the Arabic preschools on 17 out of the 35 questions in this domain while the Arabic preschools score higher on 18 items.

Table 5.10
The differences between the percentages of " Yes" responses of the two samples on" Creative Development "

	Does the curriculum achieve the objective of helping the children	Percentage of "Yes"		Z Value
		Arabic	English	
1	Developing awareness of soft, loud and graduate sounds	92.59	96.15	-.48
2	Understanding when to stop and when to start	88.89	92.31	-.38
3	Developing voice control	86.42	88.46	-.21
4	Developing the awareness of rhyme and musical patterns	64.20	100.00	-3.20
5	Appreciating a variety of musical styles	59.26	69.23	-.91
6	Appreciating the work of well known composers	17.28	30.77	-2.87**
7	Developing the awareness of the way sounds are made	86.42	84.62	.18
8	Learning to discriminate between sounds	96.30	88.46	1.12
9	Exploring a range of instruments	53.09	61.54	-.81
10	Practising musical skills	25.93	50.00	-3.39**
11	Developing awareness of the sounds made by different notes	11.11	38.46	-5.84**
12	Developing awareness of shapes and pattern	23.46	84.62	-6.60**
13	Exploring the textures and colours of a variety seeds and pulses	81.48	76.92	.42
14	Developing appreciation of art	79.01	53.85	2.24*
15	Learning about different Artists' style	23.46	23.08	.07
16	Developing awareness of texture and design	65.43	80.77	-1.36
17	Understanding how materials can be joined and hardened	45.68	50.00	-.46
18	Exploring ideas and feelings through using puppets	86.42	84.62	.18
19	Developing imagination through stories and imaginative play	92.59	88.46	.50
20	Exploring ideas by acting out a familiar journey	74.07	53.85	1.80
21	Developing awareness of seasonal changes through dance	88.89	34.62	4.98**
22	Exploring the way that animals move and behave through dance	71.60	73.08	-.13
23	Developing emotional and creative response through music and movement	53.09	73.08	-1.87
24	Developing imagination and ability to role play in a situation	79.01	73.08	.54
25	Learning about the fire service through imagination play	90.12	46.15	4.14**
26	Learning about role play travel agents and learning about other countries	51.85	30.77	2.23*
27	Learning about hair dressing through imagination play	53.09	50.00	.31
28	Learning about working in an office through role play	44.44	46.15	-.19
29	Learning about planting and growing seeds and plants	91.36	76.92	1.54
30	Designing and making resources for use in imaginative play	64.20	57.69	.59
31	Developing imagination by using cloths and props	86.42	88.46	-.21
32	Using every day objects imaginatively	86.42	76.92	.93
33	Developing enjoyment of circle dances	65.43	76.92	-1.02
34	Responding in a variety of ways to what they hear, smell, touch & feel	97.53	88.46	1.41
35	Gaining experiences of dance patterns and working with partners	66.67	61.54	.46

*** P< 0.05** **** P< 0.01**

The Table shows significant differences in 8 out of the 35 objectives of the questionnaire. These are numbered 6,10,11,12,14,21,25 and 26. Investigating the response frequencies of item 6 *" Appreciating the work of well known composers "*, 17.28% of the Arabic sample and 30.77% of the English sample said "Yes". It is clear that although there is a statistically significant difference between the two samples at P= -2.87** in favour of the English sample, it is obvious that neither of the two preschools achieve this objective. The same thing can be said about item 10 "*Practising musical skills*", and item 11 " *Developing awareness of the sounds made by different notes* ". Regarding item 12 *" Developing awareness of shapes and pattern*", 23.46% of the Arabic sample and 84.62% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at P= -6.60** in favour of the English sample. Thus it is obvious that while Arabic preschools don't achieve this objective English preschools do.

As for item 14 " *Developing appreciation of art*", 79.01% of the Arabic sample and 53.85% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at -2.24* in favour of the Arabic sample. Thus it is obvious that while Arabic preschools achieve this objective English preschools do not. The same thing can be said about item 21 " *Developing awareness of seasonal changes through dance "*, item 25 *" Learning about the fire service through imagination play"*, and item 26 *" Learning about role play travel agents and learning about other countries ".*

5.2.4 The Fourth Domain: Communication Language and Literacy

Regarding the objective of fostering the child's communication language and literacy, Table 5.11 shows the Z value estimates.

Table 5.11
The differences between the percentages of " Yes" responses of the two samples on" Communication Language and Literacy "

	Does the curriculum achieve the objective of helping the children	Percentage of "Yes"		Z Value
		Arabic	English	
1	Making up their own poems using a list of words they learned	40.74	30.77	1.24
2	Taking turns in conversations in interacting with others	96.30	92.31	.62
3	Using their phonic knowledge to write simple and regular words	58.02	80.77	-2.05*
4	Exploring and experimenting with word endings	59.26	57.69	.15
5	Listening to rhymes and making up their own accordingly	41.98	65.38	-2.44*
6	Using languages to imagine and recreate roles and experiences	54.32	69.23	-1.40
7	Writing labels and captions	28.40	57.69	-3.72**
8	Becoming to form simple sentences	51.85	73.08	-2.00
9	Retelling a narrative in the correct sequence	92.59	76.92	1.72
10	Understanding how information can be found in non-fiction texts	43.21	46.15	-.33
11	Reading a range of familiar and common words independently	49.38	69.23	-1.92
12	Linking sounds to letters	86.42	96.15	-1.06
13	Showing an understanding of the elements of stories	91.36	88.46	.34
14	Naming and sounding the letters of the alphabet	98.77	92.31	1.26
15	Understanding the main character of the story	96.30	88.46	1.12
16	Hearing and saying initial and final sounds in words	80.25	84.62	-.41
17	Writing a letter using features of letter writing	13.58	50.00	-6.15**
18	Shared reading of a big book non-fiction	23.46	69.23	-5.57**
19	Writing their own names	70.37	92.31	-1.97
20	Using full stop at the end of the sentence	59.26	61.54	-.21
21	Sustaining attentive listening and responding to what they have heard	86.42	92.31	-.62
22	Holding a pencil to form recognisable letters	92.59	92.31	.04
23	Speaking clearly with confidence	91.36	96.15	-.61
24	Showing awareness of the listener	95.06	92.31	.39
25	Describing main characters in a story	81.48	96.15	-1.46
26	Reading on sight the words of appropriate difficulty	25.93	53.85	-3.79**
27	Reading on sight captions	19.75	53.85	-5.04**
28	Reading on sight labels	20.99	57.69	-5.12**
29	Developing expressive language	70.37	84.62	-1.27
30	Writing a book using specified vocabulary	27.16	30.77	-.59
31	Predict what might happen next in a story	70.37	73.08	-.24
32	Discussing the differences between fiction and not fiction book	34.57	53.85	-2.33*
33	Discussing the sequence of time, encouraging whole-class participation.	65.43	76.92	-1.02
34	Understanding that English read from left to right and top to bottom	79.01	92.31	-1.26
35	Retelling events from non-fiction story	87.65	76.92	1.07

*** P< 0.05** **** P< 0.01**

Table 5.11 shows that Z value estimates are not significant for 26 questions. This indicates that there are no statistically significant differences between the two samples on 26 out of the 35 objectives of this domain although the percentages of "Yes" show a clear difference on many questions. The Table shows that the English preschools score higher percentages than the Arabic preschools on 25 out of the 35 questions in this domain while the Arabic preschools score higher on 10 items.

The Table shows significant differences in 9 out of the 35 objectives of the questionnaire. These are numbered 3, 5, 7, 17, 18, 26, 27, 28, and 32.

Investigating the response frequencies of item 3 " Using their phonic knowledge to write simple and regular words ", 58.02% of the Arabic sample and 80.77% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at -2.05* in favour of the English sample Thus it is obvious that English preschools achieve this objective to a higher extent than the Arabic preschools do.

Regarding items 5, 7, 17, 18,26,27,28, and 32, it can be said that the Arabic preschools don't achieve these objective since the percentages of "Yes" responses on these items were extremely low: 41.98%, 28.40%, 13.58%, 23.46%, 25.93%, 19.75%, 20.99%, and 34.75% respectively.

5.2.5 The Fifth Domain: Personal, social and emotional development

Regarding the achievement of the objective of f helping to achieve the child's personal, social and emotional development, Table 5.12 shows the Z value estimates.

Table 5.12

The differences between the percentages of " Yes" responses of the two samples on" Personal, social and emotional development"

	Does the curriculum achieve the objective of helping the children:	Percentage of "Yes"		Z Value
		Arabic	English	
1	Becoming aware of the group activities.	90.12	96.15	-.73
2	Talking about what makes each of us unique.	66.67	84.62	-1.59
3	Learning appropriate ways of handling disagreement.	66.67	92.31	-2.28*
4	Coping with changes in routines.	91.36	92.31	-.11
5	Developing sense of belongingness in a group.	97.53	96.15	.27
6	Feeling proud of personal achievement.	98.77	100.00	-.41
7	Making critical choices.	48.15	65.38	-1.70
8	Feeling confident in leading a whole group activities.	91.36	80.77	1.15
9	Learning to watch and imitate others.	96.30	92.31	.62
10	Speaking in front of a group.	88.89	100.00	-1.35
11	Learning to be still and quiet.	93.83	100.00	-.95
12	Learning how to look and listen to group instructions.	93.83	100.00	-.95
13	Developing concentration and memory.	93.83	92.31	.20
14	Being able to listen out for key information during a group story.	91.36	80.77	1.15
15	Becoming independent when putting on a coat.	93.83	92.31	.20
16	Developing independently when using cutlery.	98.77	73.08	3.37**
17	Indicating clear choices when planning craft work.	77.78	69.23	.77
18	Managing independently in the toilet.	86.42	96.15	-1.06
19	Practising saying 'please' and 'thank you'.	91.36	100.00	-1.16
20	Taking turns with a small group of children.	95.06	92.31	.39
21	Practising helping people.	93.83	88.46	.68
22	Thinking about different ways of sharing with each other.	87.65	80.77	.70
23	Playing co-operatively with a partner.	96.30	96.15	.02
24	Using colours to illustrate feelings.	95.06	69.23	2.87**
25	Talking about friends and how to be friendly.	86.42	92.31	-.62
26	Using movement and dance to express feelings.	80.25	80.77	-.05
27	Developing self-esteem.	87.65	96.15	-.95
28	Considering the feelings and wishes of other children.	83.95	92.31	-.85
29	Learning how to give and take.	97.53	96.15	.27
30	Trying new activities, initiate ideas and speak in front of a group.	83.95	88.46	-.45
31	Being interested, exited and motivated to learn.	93.83	96.15	-.33
32	Recognizing their own needs, feelings and views.	88.89	92.31	-.38
33	Forming good relationship with adults and peers and feel part of a group.	90.12	100.00	-1.25
34	Understanding what is right and wrong,	96.30	96.15	.02
35	Respecting the ideas and opinion of others.	76.54	96.15	-1.85

*** P< 0.05** **** P< 0.01**

The Table above shows significant differences in 3 out of the 35 objectives of the questionnaire. These are numbered 3, 16 and 24.

Investigating the response frequencies of item 3 " *Learning appropriate*

ways of handling disagreement", 66.67% of the Arabic sample and 92.31% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at P= -2.28* in favour of the English sample. Thus it is obvious that the English preschool achieve this objective to a higher extent than the Arabic preschools do. On the other hand, there are statistically significant differences between the two samples on items 16 " *Developing independently when using cutlery"* and item 24 " *Using colours to illustrate feelings"* P= at 3.37** and 2.87** respectively in favour of the Arabic preschool. Thus it can be said that the Arabic preschools achieve these two objectives to a higher extent than the English preschools do.

5.2.6 The Sixth Domain: Physical Development

Regarding the achievement of the objective of helping to achieve the child's physical development t, Table 5.13 shows the Z value estimates.

Table 5.13 shows that Z value estimates are not significant for 30 questions. This indicates that there are no statistically significant differences between the two samples on 30 out of the 35 objectives of this domain.

The Table shows significant differences in 5 out of the 35 objectives of the questionnaire. These are numbered 4,10,19,21 and 26.

Investigating the response frequencies of item 4 " *Handling instruments with confidence* ", 46.91% of the Arabic sample and 80.77% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at P= -3.21** in favour of the English sample. Thus it is obvious that the English preschool achieve this objective while the Arabic preschools do not. The same thing can be

said about item 21 "*Handling bats and balls with increasing control*".

Table 5.13
The differences between the percentages of " Yes" responses of the two samples on" Physical Development"

	Does the curriculum achieve the objective of helping the children:	Percentage of "Yes"		Z Value
		Arabic	English	
1	Moving with confidence and imagination to an action song	80.25	92.31	-1.16
2	Manipulating small objects with control	81.48	92.31	-1.06
3	Handling tools, objects and equipment with increasing control	75.31	84.62	-.84
4	Handling instruments with confidence	46.91	80.77	-3.21**
5	Using balancing and climbing equipment	64.20	80.77	-1.47
6	Moving and using space with confidence	93.83	88.46	.68
7	Raising health awareness of the dangers of too much sun	76.54	80.77	-.38
8	Showing awareness of hygiene	96.30	92.31	.62
9	Recognizing that changes happen to their bodies when they are active	76.54	76.92	-.03
10	Using tools and wood safely and with increasing control	81.48	53.85	2.48*
11	Using tools and small equipment with confidence	76.54	80.77	-.38
12	Moving under, around and through equipment	75.31	84.62	-.84
13	Moving in a team and use space with confidence	86.42	88.46	-.21
14	Using malleable materials with safety and control	67.90	76.92	-.80
15	Developing cutting and sticking skills	96.30	92.31	.62
16	Moving confidently through hoops	88.89	88.46	.05
17	Coping a pattern of movement	90.12	84.62	.60
18	Showing awareness of space, of themselves and others	76.54	96.15	-1.85
19	Carrying a cup filled with water from one place to the other located 3 meter away without spilling.	76.54	50.00	2.36*
20	Walking around a four circle without stepping off the line	66.67	61.54	.46
21	Handling bats and balls with increasing control	49.38	76.92	-2.60**
22	Developing hand-eye-coordination	85.19	88.46	-.33
23	Aiming at a target	69.14	80.77	-1.03
24	Handling construction toys with increasing control	92.59	84.62	.93
25	Building towers and bricks	87.65	92.31	-.51
26	Threading beads in a pattern of colours	74.07	96.15	-2.04*
27	Balancing on a bench and jump onto a mat	77.78	80.77	-.27
28	Exploring the concept of being upside down	49.38	53.85	-.45
29	Developing balance using skipping rope	49.38	65.38	-1.57
30	Assembling and baking tart	43.21	46.15	-.33
31	Using plasticine to produce three dimensional picture	50.62	65.38	-1.43
32	Walk heel-to-toe for four or more steps along a line	61.73	69.23	-.68
33	Standing on one foot for five seconds	74.07	92.31	-1.67
34	Hop on one foot for ten seconds	71.60	84.62	-1.16
35	Recognizing the importance of being healthy	90.12	92.31	-.25

*** P< 0.05** **** P< 0.01**

Regarding item 26 "*Threading beads in a pattern of colours*", 74.07% of the Arabic sample and 96.15% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at P= -2.04* in favour of the English sample. Thus it is obvious that the English preschool achieve this objective to a higher extent than the Arabic preschools do. On the other hand, there are statistically significant differences between the two samples on items 10 " *Using tools and wood safely and with increasing control* " and item 19 " *Carrying a cup filled with water from one place to the other located 3 meter away without spilling* " at P= 2.48* and 2.36* respectively in favour of the Arabic preschool. Thus it can be said that the Arabic preschools achieve these two objectives to a higher extent than the English preschools do.

Regarding item 30 " *Assembling and baking tart*", it is clear that neither the Arabic preschools nor the English preschools achieve this objective since the percentages of "Yes" responses on these items were extremely low: 43.21%, and 46.15%, respectively.

5.2.7 The Seventh Domain: The Environment

Regarding the availability of facilities and equipment in the preschool environment, Table 5.14 shows the Z value estimates.

Table 5.14 shows that Z value estimates are not significant for 19 questions. This indicates that there are no statistically significant differences between the two samples on 19 out of the 35 objectives of this domain.

Table 5.14
The differences between the percentages of " Yes" responses of the two samples on" The Environment"

	Are the following facilities and equipment available or not?	Percentage of " Yes"		Z Value
		Arabic	English	
1	A 10 metre square of usable playroom floor space per child	37.04	61.54	-2.74**
2	A 25 metre square play space outdoors per child	56.79	76.92	-1.83
3	Arranging space to facilitate small or large activities	82.72	92.31	-.95
4	The activity area including block building	85.19	84.62	.06
5	Sociodramatic play area	56.79	84.62	-2.50*
6	Art area	59.26	84.62	-2.27*
7	Music area	25.93	65.38	-4.84**
8	Science area	35.80	50.00	-1.73
9	Math area	35.80	76.92	-4.27**
10	Manipulative games area	66.67	88.46	-1.94
11	Quiet book, reading and writing area	79.01	96.15	-1.66
12	Sand and water area	50.62	84.62	-3.13**
13	Woodworking area	48.15	30.77	1.93
14	Carpet area	82.72	100.00	-1.80
15	Individual space for children to store their belongings	90.12	92.31	-.25
16	Low open shelves	81.48	96.15	-1.46
17	Indoor private area	50.62	73.08	-2.13*
18	Outdoor private area	30.86	73.08	-4.67**
19	Soft elements in the environment such as rugs, cushions, rocking chairs	39.51	88.46	-4.70**
20	Outdoor flat sections	82.72	88.46	-.56
21	Outdoor sand	50.62	73.08	-2.13*
22	Outdoor grass	51.85	65.38	-1.30
23	Outdoor hard areas for wheel toys	71.60	88.46	-1.51
24	Outdoor shaded area	88.89	88.46	.05
25	Outdoor open area	77.78	96.15	-1.75
26	Outdoor digging space	34.57	65.38	-3.46**
27	Variety of digging equipment	35.80	65.38	-3.28**
28	Variety of riding equipment	58.02	61.54	-.33
29	Outdoor climbing equipment	58.02	76.92	-1.71
30	Balancing equipment	49.38	76.92	-2.60**
31	Outdoor area surrounded by fences	59.26	84.62	-2.27*
32	A senior staff is in charge of a full day programme	86.42	88.46	-.21
33	Renewal the licenses of the pre-school yearly	80.25	76.92	.31
34	A pre-school person for all time knows First Aid Kit	44.44	80.77	-3.49**
35	In a field trip a person who knows CPR and First Aid Kit	37.04	88.46	-5.01**

* P< 0.05 ** P< 0.01

The Table shows significant differences in 16 out of the 35 objectives of the questionnaire. These are numbered 1, 5, 6, 7, 9, 12, 17, 18, 19, 21, 26 27,30,31,34, and 35.

Investigating the response frequencies of item 1 " *A 10 metre square of usable playroom floor space per child* ", 37.04% of the Arabic sample and 61.54% of the English sample said "Yes". It is clear that there is a statistically significant difference between the two samples at P= -2.74** in favour of the English sample. Thus it is obvious that the English preschool achieve this objective while the Arabic preschools do not. The same thing can be said about items 7, 9, 18, 19, 26, 27, 30, 34 and 35 in which the "Yes" responses of the Arabic sample were extremely low.

Regarding items 5, 6, 12, 17, 21, and 31,it is clear that there is a statistically significant difference between the two samples in favour of the English sample. Thus it is obvious that the English preschool achieve this objective to a higher extent than the Arabic preschools do.

Regarding item 8 " *Science area* "and 13 " *Woodworking area* ", it is clear that neither the Arabic preschools nor the English preschools achieve these two objective since the percentages of "Yes" responses on these items were extremely low: 35.80%, and 50% for item 8 and 48.15% and 30.77% for item 9 respectively.

5.3 Conclusion:

By comparing the data in the above 14 Tables, the following conclusions could be formulated:

5.2.1 Hypothesis One:

In terms of the first hypothesis, the following objectives of the preschool curriculum received significant low scores and need the most improvement:

In terms of the second domain," Knowledge and understanding of the world", objective 5 "Understanding the sequence of months and its related to birthdays" is not achieved by the preschool curriculum

In terms of the third domain," Creative Development ", the following objectives are not achieved by the preschool curriculum:

Objective 6: Appreciating the work of well known composers.

Objective10: Practising musical skills.

Objective 11: Developing awareness of the sounds made by different notes.

Objective 12: Developing awareness of shapes and pattern.

Objective 15: Learning about different Artists' style.

In terms of the fourth domain," Communication Language and Literacy ", the following objectives are not achieved by the preschool curriculum:

Objective 1: Making up their own poems using a list of words they learned.

Objective 7: Writing labels and captions.

Objective 10: Understanding how information can be found in non-fiction texts.

Objective17: Writing a letter using features of letter writing.

Objective 18: Shared reading of a big book non-fiction.

Objective 26: Reading on sight the words of appropriate difficulty.

Objective 27: Reading on sight captions.

Objective 28: Reading on sight labels.

Objective30: Writing a book using specified vocabulary.

Objective 32: Discussing the differences between fiction and not fiction book.

In terms of the seventh domain," The environment ", the following objectives are not achieved by the preschool curriculum:

Objective 7: Music area.

Objective 8: Science area.

5.2.2 Hypothesis Two:

Regarding the second hypothesis and in terms of the differences between the Arabic and the English preschools, the results show that the Arabic preschools do not achieve the following objectives while the English preschools do. These areas need the most improvement in the Arabic preschool curriculum:

In terms of the first domain," Mathematical Knowledge":

Objective 15: Comparing different units of time.

Objective 19: Describing simple properties of 2D shapes.

Objective 24: Recognizing the name of the month of the year.

Objective 34: Using developed mathematical ideas and methods to solve practical problems.

In terms of the second domain," Knowledge and understanding of the world":

Objective 5: Understanding the sequence of months and its related to birthdays

Objective 15: Investigating bubble mixture and bubble shapes.

In terms of the third domain," Creative Development ":

Objective 6: Appreciating the work of well known composers

Objective 10: Practising musical skills.

Objective 11: Developing awareness of the sounds made by different notes.

Objective 12: Developing awareness of shapes and pattern.

In terms of the fourth domain," Communication Language and Literacy ":

Objective 3: Using their phonic knowledge to write simple and regular words

Objective 5: Listening to rhymes and making up their own accordingly.

Objective 7: Writing labels and captions.

Objective17: Writing a letter using features of letter writing.

Objective 18: Shared reading of a big book non-fiction.

Objective 26: Reading on sight the words of appropriate difficulty.

Objective 27: Reading on sight captions.

Objective 28: Reading on sight labels.

Objective 32: Discussing the differences between fiction and not fiction book.

In terms of the fifth domain," Personal, social and emotional development":

Objective 3: Learning appropriate ways of handling disagreement.

In terms of the sixth domain," Physical development":

Objective 4: Handling instruments with confidence.

Objective 21: Handling bats and balls with increasing control.

Objective 26: Threading beads in a pattern of colours.

In terms of the seventh domain," The environment ":

Objective 1: A 10 metre square of usable playroom floor space per child.

Objective 5: Sociodramatic play area.

Objective 6: Art area.

Objective 7: Music area.

Objective 9: Math area.

Objective 12: Sand and water area.

Objective 17: Indoor private area.

Objective 18: Outdoor private area.

Objective19: Soft elements in the environment such as rugs, cushions, rocking chairs.

Objective 21: Outdoor sand.

Objective 26: Outdoor digging space.

Objective 27: Variety of digging equipment

Objective 30: Balancing equipment.

Objective 31: Outdoor area surrounded by fences.

Objective 34: A pre-school person for all time knows First Aid Kit

Objective 35: In a field trip a person who knows CPR and First Aid Kit.

On the other hand, the results show that the English preschools do not achieve the following objectives while the Arabic preschools do:

In terms of the second domain," Knowledge and understanding of the world":

Objective 6: Understanding how we learn to talk

Objective 9: Recognizing that living things live in a variety of habits.

Objective 14: Learning about the health centre

Objective 15: Investigating bubble mixture and bubble shapes

Objective 26: Understanding how things move

Objective 28: Observing what happens when you whisk different mixture.

In terms of the third domain," Creative Development ":

Objective 14: Developing appreciation of art.

Objective 21: Developing awareness of seasonal changes through dance.

Objective 25: Learning about the fire service through imagination play.

Objective 26: Learning about role play travel agents and learning about other countries.

In terms of the fifth domain," Personal, social and emotional development":

Objective 16: Developing independently when using cutlery.

Objective 24: Using colours to illustrate feelings.

In terms of the sixth domain," Physical development":

Objective 10: Using tools and wood safely and with increasing control.

Objective 19: Carrying a cup filled with water from one place to the other located 3 meter away without spilling.

Chapter five described the results of the first and second hypotheses of the study. The teachers' evaluative estimates of the child's achievement of the seven domains of the study were presented and compared. Chapter six presents the results of the third hypothesis. It describe the differences between the Arabic and English preschools regarding the teacher's qualifications, experience and duties, ratio of teachers to children, type of curriculum, and provision of stimulating environment.

CHAPTER SIX

SITE VISITS AND TEACHERS' INTERVIEWS

6.1 Introduction

The purpose of chapter six is to present the results from testing the third hypothesis of the study. It describe the differences between the Arabic and English preschools regarding the teacher's qualifications, experience and duties, ratio of teachers to children, type of curriculum, and provision of stimulating environment. This hypothesis states that:

> "There are no statistically significant differences between the English schools and the Arabic schools curricula regarding the teacher's qualifications, experience and duties, ratio of teachers to children, type of curriculum, and provision of stimulating environment."

The site visits and teachers' interviews were conducted from March to November 2003. The researcher visited 17 preschools, 9 Arabic speaking schools and 8 English speaking schools Table 6. These schools represented 31.7% of preschools in Qatar at the time visited. These site visits and interviews aimed to address the following main questions:

1. To what extent do Arabic speaking schools and English speaking schools differ in terms of their teachers' qualifications, experience and duties?

2. To what extent do Arabic speaking schools and English speaking schools differ in terms of the ratio of teachers to children?

3. What type of curriculum do these schools use and to what

extent do teachers find it appropriate in terms of 12 domains adapted from the Position statement on developmentally appropriate practice in early childhood programs serving children from birth through 8 (NAEYC, 1997).

4. Do these preschools provide a safe, healthy and stimulating environment for children regarding space and furnishing, personal care routines, language reasoning, activities, interaction, programme structure, and parents and staff?

Table 6.1

Names of sample schools visited

Arabic speaking schools	English speaking schools
1. Al-Bayareq Preschool 2. Al-Dana Preschool 3. Almuntaza Modern Kindergarten 4. The Young Muslim Kindergarten 5. Al-Nasser Kindergarten 6. Al-Hilal Almuneer School 7. Al-Sama Preschool 8. Al-Garrafa Kindergarten 9. Al-Numan Preschool	1. Doha Independent School 2. Sunbeam Kindergarten 3. Doha International School 4. The American School of Doha 5. Park House Preschool 6. Doha English Speaking School 7. Qatar International School 8. Doha Academy

6.2 Evaluation Focus:

6.2.1 Question Focus 1:

"To what extent do Arabic speaking schools and English speaking schools differ in terms of their teachers' qualifications, experience and duties?"

Childhood education teachers in Qatar possess diverse qualifications. Does this diversity of early childhood teachers' matter? Current research confirms findings from the past two decades that teacher qualification significantly affect the quality of care and education provided to young children (Bowman, et al, 2001). Research also confirms that higher qualifications in preschool children's caregivers and teachers contribute to more positive short and long-term outcomes for these children (Kontos, et al, 2001).

Despite all of this evidence from research about the importance of qualifications of the teachers and caregivers who work with young children, we still we still find extremes in the caregivers and teachers:

- Some have earned college or graduate degrees, while others possess a high school diploma or its equivalent.
- Some have studied early childhood education or child development, while others have not.
- Some have a great deal of experience working with young children, while others do not.

Table 6.2

Educational Levels of Head Teachers in Arabic speaking schools

	Early Childhood Education		Non-ECE		Total	
Highest Degree	*n*	%	*n*	%	*n*	%
High School Certificate	0	00.0%	11	61.1%	11	61.1%
Two - year Diploma	0	00.0%	4	22.2%	4	22.2%
Bachelor's degree	0	00.0%	3	16.7%	3	16.7%
Graduate degree	0	00.0%	0	00.0%	0	00.0%
Total	0	00.0%	18	100.0%	18	100.0%

Table 6.3

Educational Levels of Head Teachers in English speaking schools

	Early Childhood Education		Non-ECE		Total	
Highest Degree	*n*	%	*n*	%	*n*	%
High School Certificate	0	00.0%	0	00.0%	0	00.0%
Two - year Diploma	4	25%	0	00.0%	4	25%
Bachelor's degree	8	50.0%	1	06.3%	9	56.3%
Post graduate degree	3	18.7%	0	00.0%	3	18.7%
Total	15	93.8%	1	06.2%	16	100.0%

As shown in Table 6.2 and Table 6.3, for statistical purposes, the sample was divided into four categories based upon whether participants'

highest level of education was, as follows: a high school Certificate; Two year Diploma; a bachelor's degree; or a graduate degree.

Regarding the Arabic speaking schools Table 6.2, none of the school teachers had Early Childhood Education degree; 61.1% of the participants had achieved the lowest level of education, 22.2% had two year diploma, 16.7% had bachelor degree, and none had graduate degrees.

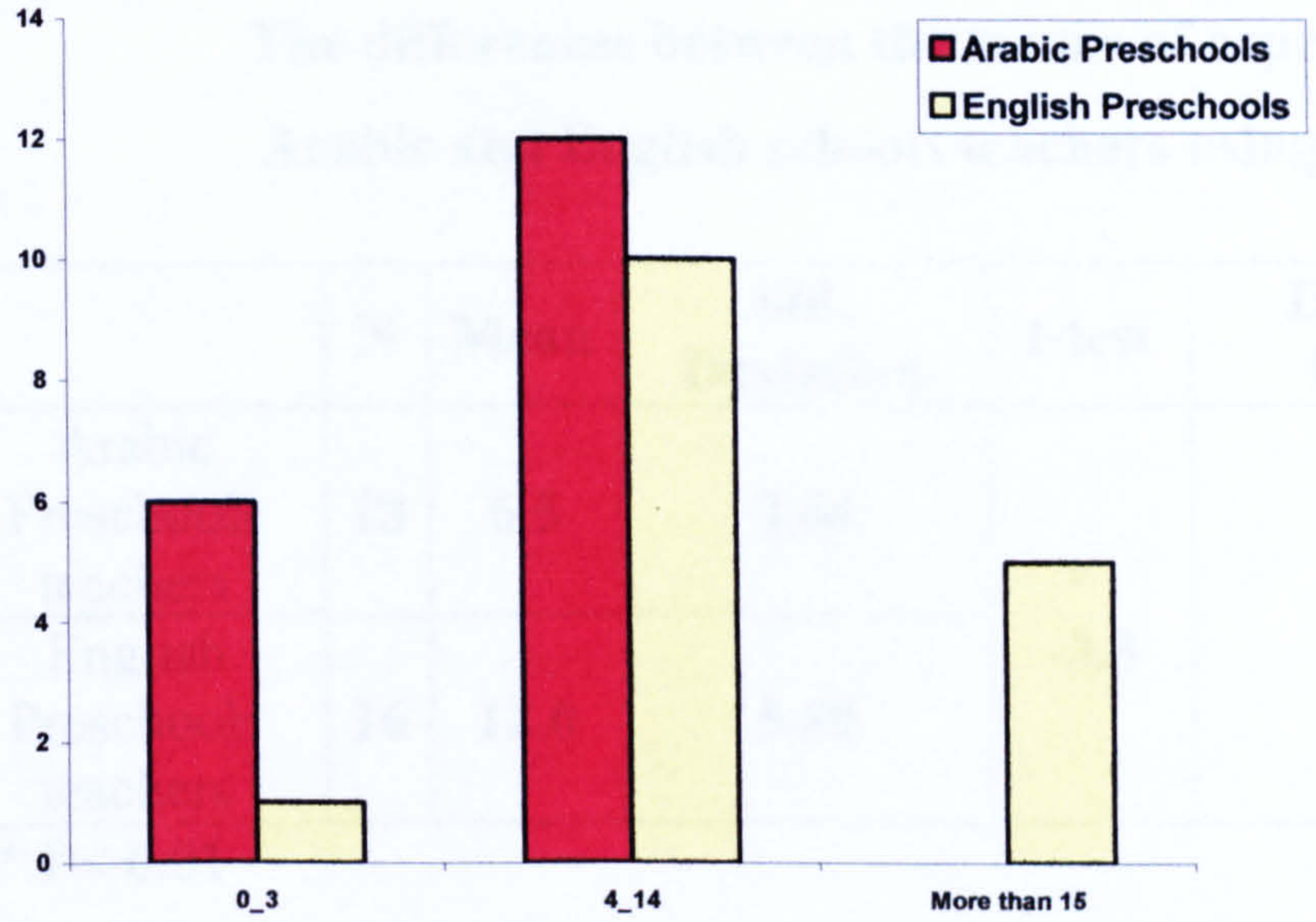
On the other hand, 93.8% of teachers in the English speaking schools had early Childhood Education degree; none of the participants had achieved the lowest level of education, 25% had two-year diploma, 56.3% had bachelor degree, and 18.7% had graduate degrees. The results show that the English preschool teachers are better educated. These percentages reflect a different approach to staffing in each of these schools.

Table 6.4

Teachers' Experience in Early Childhood Education

	Arabic Preschools		English Preschools	
Years of Experience	*n*	%	*n*	%
0-3	6	33.3%	1	06.2%
4-14	12	66.7%	10	62.5%
More than 15	0	00.0%	5	31.3%
Total	18	100.0%	16	100.0%
Average	6.5		12	

Figure 6.1



In terms of experience in ECE settings, 33.3% of Arabic speaking preschool teachers were in the early years of their careers (0 to 3 years), while 6.2% of English speaking preschool teachers were in the same category. 66.7% of Arabic speaking preschool teachers were in the middle years of their careers (4 to 14 years) while 62.5% of English speaking preschool teachers were in the same category. In terms of the last category, none of the Arabic speaking preschool teachers were in this category while 31.3% of the English speaking preschool teachers were in the later years of their careers (more than 15 years). The Arabic speaking preschool teachers had worked in the field for an average of 6.5 years while the English speaking preschool teachers had worked for an average of 12 years.

Table 6.5 shows the differences between the means of experiences of the Arabic and English schools teachers using t-test

Table 6.5

The differences between the means of experiences of the Arabic and English schools teachers using t-test

	N	Mean	Std. Deviation	t-test	Degree of freedom	P
Arabic Preschools teachers	18	6.5	3.64	* -3.3	32	0.00
English Preschools teachers	16	12.0	5.89			

*** P< 0.01**

The above results show a significant difference between the Arabic speaking preschool teachers and the English speaking preschool teachers in terms of education and experience both in favour of the latter.

There is no doubt that specialized education is desirable in preschool teachers. Teachers of young children, first and foremost, need depth and breadth of education and experience, exposure to a world of ideas and perspectives, along with the skills to communicate and express their knowledge fluidly - the type of knowledge, skills, and stimulation acquired most handily through a 4-year degree program. Indeed, there is consensus in the field among some of the most prominent scholars that to become fully qualified as early childhood, teachers need to acquire the knowledge and skills related specifically to early childhood education and child development (see Hao 2000) ; Horm-Wingerd & Hyson, 2000).

In addition to teaching, all teachers in the Arabic speaking preschools responded that they had other duties. They indicated that they spent a significant portion of every workday in the direct, hands-on care or education of young children; however, they also had part-time

administrative duties, for example, as program directors, office managers, secretaries or school-trip leaders. In addition, no teacher assistants were found in these schools. In the English speaking preschools, on the other hand, every teacher had an assistant or two and did not have any administrative duties in most cases.

Regarding wages, the Arabic speaking preschool teachers indicated that they are much far poorly paid compared to the English speaking preschool teachers. The typical salaries of the Arabic school teachers range between QR. 1200-1800 compared to QR. 2000-4000 range of the English school teachers.

Teachers said that a growing number of preschool teachers are resigning because of low wages, heavy workloads and poor working conditions that leads to high turnover in the Arabic speaking preschools. They added that many teachers are leaving to work in primary schools where wages and entitlements are better, while university graduates even those who had planned to become preschool teachers are also opting for other education sectors. The principal of one of these preschools said that this trend had left many preschool unable to fill jobs. "Preschools that pay their employees well and offer them appropriate working conditions are more likely to have teachers who stick around. Low turnover is key to ensuring consistent, stable care and education for children" she added.

6.2.2 Question Focus 2:

'To what extents do Arabic speaking schools and English speaking schools differ in terms of the ratio of teachers to children?"

"Are smaller classes better than larger classes?" The question continues to be debated among teachers, administrators, and parents as well as in the research community. The issue persists because of the tension between the research findings and the cost of implementation. A great deal of empirical data have been collected. However, they have so far been less than convincing and not consistent enough to justify the expense of the additional classrooms and teachers that would be required.

Over the past 2 decades there have been many summaries of research on the relationship of class size to academic achievement. The following are particularly worthy of note because of their comprehensiveness, and because they planted the seeds for much of the research that followed.

The most widely cited review is the classic meta-analysis of research on the relationship of class size and achievement (Glass & Smith, 1978). The authors collected and summarized nearly 80 studies of the relationship of class size with academic performance that yielded over 700 class-size comparisons on data from nearly 900,000 pupils. The two primary conclusions drawn from this material are:

- reduced class size can be expected to produce increased academic achievement (p. iv); and

- the major benefits from reduced class size are obtained as the size is reduced below 20 pupils (p. v).

A compilation of studies examined by Educational Research Service (Robinson & Wittebols, 1986; Robinson, 1990) is noteworthy because of its extensiveness--more than 100 separate studies were

reviewed. (Robinson's 1990) conclusions added an important set of qualifications to the findings of Glass and Smith:

> *"Research does not support the expectation that smaller classes will of themselves result in greater academic gains for students. The effects of class size on student learning vary by grade level, pupil characteristics, subject areas, teaching methods, and other learning interventions."*(p. 90)

In particular, the review concludes that small classes are most beneficial in reading and mathematics in the early primary grades and that: *"the research rather consistently finds that students who are economically disadvantaged or from some ethnic minorities perform better academically in smaller classes"*(p. 85).

In 1984 the state of Indiana funded an initiative to reduce class sizes in grades 1 through 3 to an average of 18 pupils, or to 24 pupils if an instructional assistant was in the classroom. During the initial year, 286 of 303 districts participated to a greater or lesser extent. The two primary outcomes in brief are:

- Positive outcomes were found for small classes on such factors as time on task, individualized instruction, well-behaved classes, and teacher satisfaction; but

- The results for academic achievement were mixed--at times, small classes were found to have superior outcomes and, at times, the large classes performed better.

Tennessee's Project STAR, a large-scale controlled study of the effects of reduced class size, was conducted in 79 elementary schools in

the state of Tennessee from 1985 to 1989. In all, about 7,500 pupils in more than 300 classrooms participated in the 4-year longitudinal study.

The results were compiled into a Tennessee State Department of Education report (Word,1990). It was found that regardless of the location of the school or the ability of the pupils, children who spent the first four years of schooling in small classes out-performed their peers in larger classes in a range of tests.

After the positive STAR findings, Tennessee authorized a study (The follow-up: the Lasting Benefits Study 1995 -1996) to see how long the initial benefits of small classes would persist. Although all children were returned to regular-size classes in grade 4, the Lasting Benefits Study (LBS) continued to follow a significant portion of these pupils. In the 1995 -1996 school year, the majority of STAR students were in grade 10 and were still being tracked (Finn,2001).

The grade 4 results showed that, even after the small-class intervention was disbanded:

- Students who had been in smaller classes had higher achievement in all academic areas compared to students in regular or teacher-aide classes;

- The small-class effect size (small to regular) ranged from 0.11 in social studies to 0.16 on the criterion-referenced mathematics test; and

- Pupils who had been in small classes were rated as expending more effort in the classroom, taking greater initiative with regard to learning activities, and displaying less disruptive or

inattentive behaviour compared to their peers who had been in regular-size classes.

A follow-up study (Finn,2001) charting the progress of the same children through secondary school has found that the positive effects of small teaching groups last right up until the sixth form. 75% of pupils taught in groups of around 15 completed school successfully compared with 64% of those in groups of 22-25. More of the pupils taught in small classes achieved the highest grades in their secondary school exams.

Researchers at London University's Institute of Education carried out another study of the effects of class size on pupils' attainment and adjustment to school. This study was presented at the British Educational Research Association conference at Cardiff University in September 2000. The study was the first substantial investigation into the effects of class size to be mounted in Britain.

For their research, the team studied more than 10,000 children in more than 300 state schools in 13 education authorities in the UK.

They found that children in smaller classes in their first year of school improved measurably in literacy and math tests. They also found that achievement in literacy decreased as class size rose from about 15 to about 30, although in maths there was little effect on progress in classes with more than 25 pupils (TES September 8, 2000).

In a study of the effects of class size, Alan Krueger and Diane Whitmore, of Princeton university, concluded that children in US elementary schools in class sizes of 13 to 17 pupils score higher on standardised school tests and are more likely to sit a college entrance exam than those in larger classes.

The study looked at 19 Tennessee schools where 11,600 children and their teachers were randomly assigned to classes of 13-17 pupils, regular classes of 22-25 and regular classes with teacher aides. After four years the eight-year-olds returned to regular classes. In 1998 the first children from the project finished school.

The researchers found that 43.7% of pupils from the smaller classes took university entrance exams, compared with 40% of those from the regular classes, and 39.9% of those from regular classes with teacher aides. They say the percentage difference is statistically significant: it is unlikely to have occurred by chance.

But it is the academic prospects of black pupils that are most improved in smaller groups. Only 31.7% of black pupils from regular classes went on to take university entrance exams, compared with 40.2% from small classes.

"Attending a small class reduced the black-white gap in the college entrance test-taking rate by 54%," said the researchers.

As class sizes were reduced from 26-30 pupils, to 21-25 and then to 16-20, the likelihood of students sitting an entrance exam increased (The Guardian, 2001).

The studies above provide compelling evidence that small classes in the early stages are academically superior to regular-size classes.

According to the American National Association for the Education of Young Children (NAEYC), a preschool should have one teacher for every seven children, with no more than 14 children. Preschools in Qatar are not required to follow NAEYC's recommendations, though a good preschool will keep groups of children

small no matter how many teachers they have, to encourage interaction and development. Table 6.6 shows the teacher-child ratio in Arabic and English speaking schools in Qatar.

Table 6.6

Teacher-Child Ratio in Preschools

Arabic Preschools		English Preschools	
n	average	*n*	average
30,27,30,38,22,18, 20,25,22,	1-25	20,18,12,17,14, 22,16,10	1-16

Table 6.6 shows that the average observed teacher–child ratio was approximately 1:25 in the Arabic speaking schools. In comparison, in the English speaking preschool sample the ratio averaged 1:16.

6.2.3 Question 3:

"What type of curriculum do these schools use and to what extent do teachers find it appropriate?"

The Qatar Experiences Curriculum is the most common in the Arabic speaking preschools. Table 6.7 indicates that 88.9% of these schools adopt and use this curriculum. Only one of the Arabic preschool sample uses a different curriculum- the Saudi Experiences Curriculum. On the other hand, 62.5% of the English Preschools are reported to adopt the British National Curriculum, 25% using the International Curriculum and 12.5% using the American National Standard.

Table 6.7
Type of curriculum used in preschools

Curriculum used	Arabic Preschools		English Preschools	
Qatari Curriculum Experiences	8	88.9%	0	00.0%
Saudi Curriculum Experiences	1	11.1%	0	00.0%
British National Curriculum	0	00.0%	5	62.5%
American National Standard	0	00.0%	1	12.5%
International Curriculum	0	00.0%	2	25.0%
Total	9	100.0%	8	100.0%

Regarding the extent to which teachers find the curriculum approprite in terms of 12 domains, Table 6.8 show teachers' evaluation of the curriculum in terms of achieving the desirable outcomes.

Regarding the first question "Does the curriculum reflect current and emerging views of early childhood education?" the majority of teachers in both types of schools found the curriculum appropriate with an average of 72% of the Arabic preschools and 92% of the English preschools. In terms of the first question, more English speaking preschool teachers- 92% - than Arabic preschool teachers- 80% - were convinced that the curriculum they use reflects current and emerging views of early childhood education. 20% of the Arabic preschool teachers said that the curriculum had reflected current views on early childhood education to a high extent when it was introduced in 1991, but changing views and situations in recent times require that the curriculum be revised

Table 6.8
Teachers' evaluation of their curricula

	The curriculum you use.....	Arabic schools		English schools	
		Yes	No	Yes	No
1	Does it reflect current and emerging views of early childhood education?	80%	20%	92%	8%
2	Does it promote interactive learning and encourage the child's construction of knowledge?	63%	27%	96%	4%.
3	Does it help achieve social, emotional, physical, and cognitive goals?	72%	28%	92%	8%
4	Does it encourage development of positive feelings and dispositions toward learning while leading to acquisition of knowledge and skills?	75%	25%	84%	16%
5	Is it meaningful and relevant to the children's lives?	87%	13%	96%	4%
6	Are the curriculum expectations realistic and attainable at this age?	67%	23%	88%	12%
7	Is it of interest to the children and to the teacher?	75%	25%	96%	4%
8	Is it sensitive to and respectful of cultural and linguistic diversity?	70%	30%	88%	12%
9	Is the information presented accurate and credible according to the recognized standards of the relevant discipline?	90%	10%	100%	0%
10	Is this content worth knowing? Can it be learned by these children efficiently and effectively now?	80%	20%	100%	0%
11	Do you have enough time to cover the curriculum?	90%	10%	100%	0%
12	Does it foster children's exploration and inquiry, rather than focusing on "right" answers or "right" ways to complete a task?	87%	13%	92%	8%
	Average	**78%**	**22%**	**94%**	**6%**

Regarding the second question, an average of 67% of Arabic preschool teachers compared to 93% of English preschool teachers thought that the curriculum they use promotes interactive learning and encourage the child's construction of knowledge.

Responding to question 3, an average of 72% of Arabic preschool teachers compared to 92% of English preschool teachers thought that the curriculum they use helps achieve social, emotional, physical, and cognitive goals.

In terms of question 4, an average of 75% of Arabic preschool teachers compared to 84% of English preschool teachers thought that the curriculum they use encourages development of positive feelings and dispositions toward learning while leading to acquisition of knowledge and skills.

Regarding question 5, an average of 87% of Arabic preschool teachers compared to 96% of English preschool teachers thought that the curriculum they use is meaningful and relevant to the children's lives.

Responding to question 6, an average of 67% of Arabic preschool teachers compared to 88% of English preschool teachers thought that the expectations in the curriculum they use are realistic and attainable at this age.

Regarding question 7, an average of 75% of Arabic preschool teachers compared to 96% of English preschool teachers thought that the curriculum they use is of interest to the children and to the teacher

In terms of question 8, an average of 70% of Arabic preschool teachers compared to 88% of English preschool teachers thought that the

curriculum they use is sensitive to and respectful of cultural and linguistic diversity.

Responding to question 9, an average of 90% of Arabic preschool teachers compared to 100% of English preschool teachers thought that the information presented in the curriculum they use is accurate and credible according to the recognized standards of the relevant discipline.

Responding to question 10, an average of 80% of Arabic preschool teachers compared to 100% of English preschool teachers thought that the curriculum content is worth knowing and can be learned by their children efficiently and effectively.

Regarding question 11, an average of 90% of Arabic preschool teachers compared to 100% of English preschool teachers thought that they have enough time to cover the curriculum.

Responding to question 12, an average of 87% of Arabic preschool teachers compared to 92% of English preschool teachers thought that the curriculum foster children's exploration and inquiry, rather than focusing on "right" answers or "right" ways to complete a task.

6.2.4 Question Focus 4:

"Do these preschools provide a safe, healthy and stimulating environment for children?"

Results suggest that the quality of English speaking preschool classrooms is better than that of Arabic speaking preschool classrooms in general. A comparison of overall mean ECERS scores between two samples of preschool classrooms shows that English speaking preschool

classrooms have a higher mean ECERS score. The overall mean ECERS score for the English speaking preschool sample was 6.00 for a sample of 16 classrooms, as compared to 4.8 for a sample of 18 Arabic speaking classrooms in Qatar.

The mean scores for all classrooms in the study for each of the 43 items are contained in Table 6.9. Items are listed under the subscale to which they belong, e.g., Personal Care, Furnishings.

On the *ECERS-R,* the Arabic schools average ratings ranged from a low of 0.0 to a high of 5.8 while the English schools average ratings ranged from a low of 3.2 to a high of 6.7. Twenty-eight (65.1%) of the 43 average ratings were below 5.0 in the Arabic schools suggesting the "inadequate" quality of programs in Arabic speaking preschools. However, only one item (2.3%) had average rating of 5.0 or less. On 42 items, English speaking classrooms' average score was above 5, which means they exceeded the "good" standard.

In terms of the subscale scores, Table 6.10 shows the Mean Subscale Scores of both preschool programs.

Subscale Means reveal that English Speaking Preschools are of higher quality than Arabic Speaking Preschools in terms of the seven subscales of ECERS-R. All subscales are reported to exceed the rating score 5.0 " good quality". Arabic Speaking Preschools, on the other hand, exceeded the score 5.0 only on one subscale "Interaction". On all other subscales, the score was below 5.0 which implies the low quality of the Arabic preschool programs.

Table 6.9
Distribution of Mean Scores on ECERS-R Items

	Item	Arabic schools	English schools	t-test	Sig.
A	**Space and Furnishings**				
1	Indoor space	4.8	6.2	-5.4	0.000**
2	Furniture for routine care, play and learning	4.2	6.7	-8.2	0.000**
3	Furnishings for relaxation and comfort	4.8	5.9	-3.1	0.004**
4	Room arrangement for play	4.8	5.4	-1.2	0.224*
5	Space for privacy	3.9	5.2	-2.3	0.027**
6	Child-related display	5.8	6.2	-1.4	0.184*
7	Space for gross motor play	5.2	6.2	-3.5	0.001**
8	Gross motor equipment	4.8	5.6	-2.0	0.052**
B	**Personal Care Routines**				
9	Greeting/departing	5.4	6.3	-3.3	0.003**
10	Meals/snacks	4.9	6.1	-4.8	0.000**
11	Nap/rest	4.8	6.4	-8.6	0.000**
12	Toileting/diapering	4.2	5.9	-4.1	0.000**
13	Health practices	4.8	6.3	-5.8	0.000**
14	Safety practices	5.2	6.2	-3.4	0.002**
C	**Language Reasoning**				
15	Books and pictures	4.3	5.8	-3.8	0.001**
16	Encouraging children to communicate	5.1	6.4	-3.8	0.001**
17	Using language to develop reasoning skills	3.9	6.2	-9.7	0.000**
18	Informal use of language	4.2	5.9	-4.9	0.000**
D	**Activities**				
19	Fine motor	4.3	6.2	-6.1	0.000**
20	Art	4.2	6.3	-6.3	0.000**
21	Music/movement	3.8	5.9	-4.8	0.000**
22	Blocks	4.2	6.3	-6.8	0.000**
23	Sand/water	4.9	6.2	-3.9	0.000**
24	Dramatic play	3.9	5.7	-4.9	0.000**
25	Nature/science	4.8	6.2	-4.5	0.000**
26	Math/number	4.2	6.3	-9.0	0.000**
27	Use of TV, video, and/or computers	5.2	6.2	-4.2	0.000**
28	Promoting acceptance of diversity	4.2	6.2	-6.3	0.000**
E	**Interaction**				
29	Supervision of gross motor activities	5.3	6.6	-6.0	0.000**
30	General supervision of children (other than gross motor)	5.1	6.4	-5.2	0.000**
31	Discipline	5.2	6.6	-5.8	0.000**
32	Staff-child interactions	5.2	5.9	-1.9	0.064**
33	Interactions among children	5.3	5.5	-0.4	0.724
F	**Program Structure**				
34	Schedule	5.8	5.8	-0.1	0.925
35	Free play	4.9	6.2	-4.2	0.000**
36	Group time	5.2	6.4	-5.1	0.000**
37	Provisions for children with disabilities	0.0	3.2	-18.3	0.000**
G	**Parents and Staff**				
38	Provisions for parents	3.9	5.8	-6.0	0.000**
39	Provisions for personal needs of staff	4.2	5.3	-2.5	0.018**
40	Provisions for professional needs of staff	4.2	5.8	-4.9	0.000**
41	Staff interaction and cooperation	5.3	6.2	-3.3	0.002**
42	Supervision and evaluation of staff	4.8	5.9	-3.8	0.001**
43	Opportunities for professional growth	3.8	5.3	-3.2	0.003**
	Overall Mean	**4.6**	**6.0**	**-9.9**	**0.000****

*** P< 0.05** **** P< 0.01**

Table 6.10
Mean Subscale Scores on Early Childhood Environment Rating Scale–Revised
(ECERS-R)

Subscale	Arabic Preschool Subscale Mean	English Preschool Subscale Mean	t-test	Sig.
Space and Furnishings	4.8	6.0	-5.5	0.000**
Personal Care Routines	4.9	6.2	-8.7	0.000**
Language and Reasoning	4.4	6.3	-8.6	0.000**
Activities	4.4	6.2	-9.0	0.000**
Interactions	5.2	6.2	-4.8	0.000**
Program Structure	4.0	5.4	-11.2	0.000**
Parents and Staff	4.4	6.0	-7.3	0.000**
Scale: 1 =*Inadequate*, 2 =*Inadequate to Minimal*, 3 =*Minimal*, 4 =*Minimal to Good*, 5 =*Good*, 6 =*Good to Excellent*, and 7=*Excellent*				

** P< 0.01

Figure 6.2

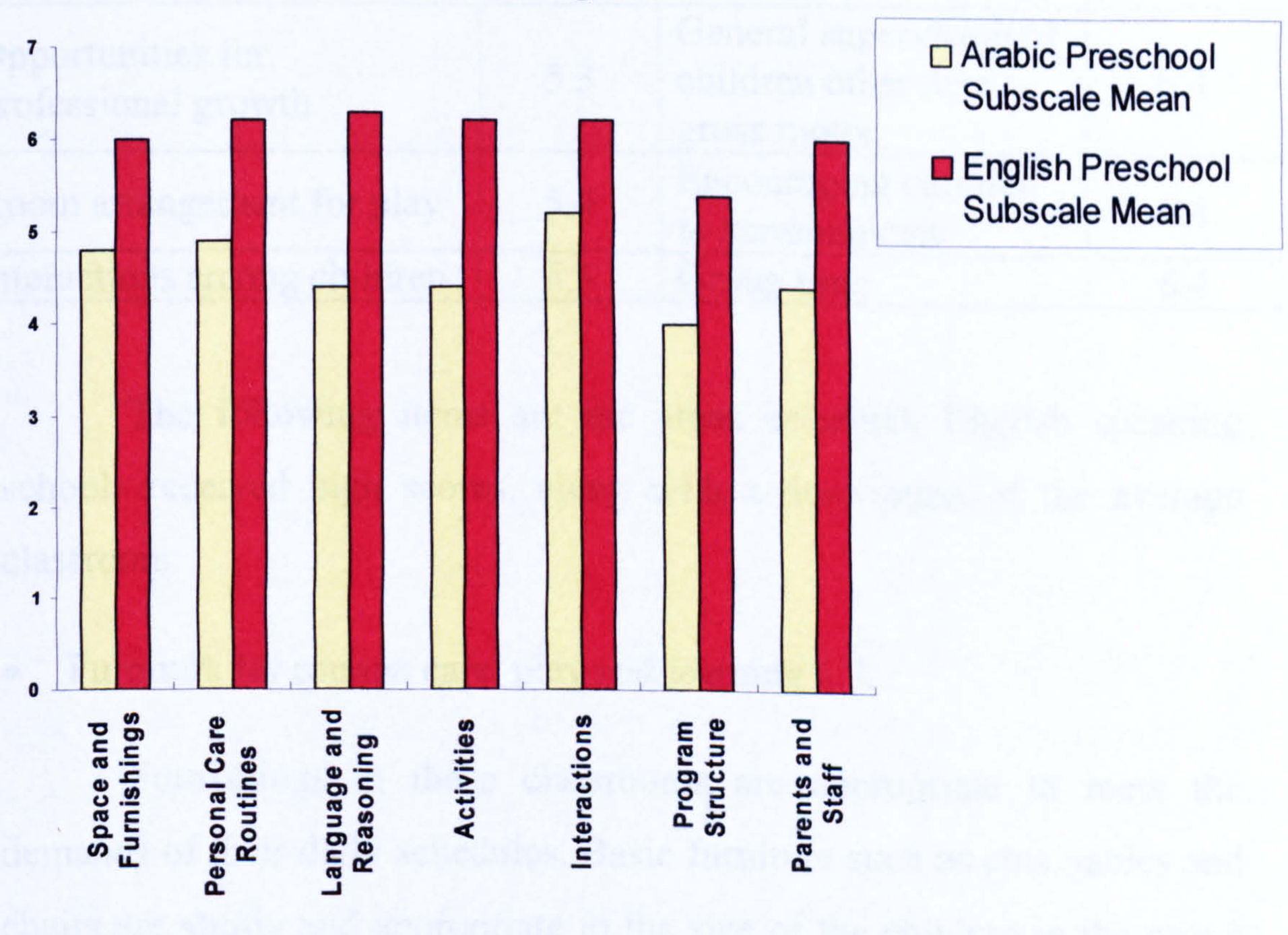


Table 6.11 and Table 6.12 show the Early Childhood Environment Rating Scale Results for Lowest and Highest Item-Averages in the English Speaking Preschools and the Arabic Speaking Preschools respectively.

Table 6.11

Early Childhood Environment Rating Scale Results for Lowest and Highest Item-Averages -English Speaking Preschools

Lowest Item-Average Ratings		Highest Item-Average Ratings	
Item Name	**Item-Average Rating**	**Item Name**	**Item-Average Rating**
Provisions for children with disabilities	3.2	Furniture for routine care, play and learning	6.7
Space for privacy	5.2	Supervision of gross motor activities	6.6
Provisions for personal needs of staff	5.3	Discipline	6.6
Opportunities for professional growth	5.3	General supervision of children other than gross motor	6.4
Room arrangement for play	5.4	Encouraging children to communicate	6.4
Interactions among children	5.5	Group time	6.4

The following items are the areas in which English speaking schools received high scores, along with a description of the average classroom:

- Furniture for routine care, play and learning 6.7.

Furnishings in these classrooms are appropriate to meet the demands of their daily schedules. Basic furniture such as cots, tables and chairs are sturdy and appropriate to the size of the children in the group in order for children to be comfortable, have proper body support, and

focus on learning, playing, and routine activities rather than their own discomfort. Teachers have easy access to routine care furnishings, such as cots, in order to maintain proper supervision and provide smooth transitions between activities

- Supervision of gross motor activities 6.6.

Teachers in these preschools use gross motor activities as learning opportunities to promote positive social interactions and to encourage the development of skills and new experiences Diligent supervision of gross motor activities, whether indoors or outdoors, is highly considered in these schools to prevent accidents and insure safe, active play.

- Discipline 6.6

To a great extent, these schools have a consistent routine that provides a balance of activities designed to meet individual needs and foster physical, cognitive, social, and emotional growth. The daily schedule provides large amounts of time for play, smooth transitions between activities, and a balance between child-initiated and teacher-directed activities.

- General supervision of children other than gross motor 6.4

During activities, teachers balance the level of supervision and control based upon the ages, abilities, and individual needs of the children. Adequate supervision and awareness of the whole group is addressed for children's health and safety and in the recognition of accomplishments, which is necessary for children's emotional well-being

- Encouraging children to communicate 6.4

Activities and materials that promote language development are available for use throughout the classroom and the daily schedule. Most teachers successfully establish an environment where language exploration and usage is encouraged.

- Group time 6.4

In group-care situations, the focus in most classrooms is on meeting individual needs and guiding children as they interact in small groups. Whole group activities are kept to a minimum and limited to gatherings that follow the interests and involvement of the children.

A model classroom schedule of one of the English speaking preschools observed by the researcher is shown in (Appendix 9).

Regarding the lowest item-average ratings in the English Speaking Schools, the "Provisions for children with disabilities" item received the lowest item- average rating of 3.2. Meeting the needs of children with disabilities requires knowledge of routine care needs developmental levels, individual assessments, and the integration of the children in ongoing classroom activities. It also requires the involvement and establishment of a partnership between the parents and staff in setting attainable goals that will assist the child in reaching his/her full potential. The low score for this item refers to the fact that only two of the sample preschools have children with disabilities and to the availability of other specialised government centres that take care of these children.

The second lowest item-average rating was a 5.2 for "Space for privacy" item. Some children experience unacceptably high levels of stress when exposed to constant activity and interaction. Places where

children can escape from the pressures of group care promote positive self-esteem. Providing a child with opportunities, space, and time to be alone can contribute to positive classroom behaviour. Although children had a space to be alone and were allowed to play alone in all the sample preschools, three of these didn't have a space protected from intrusion by others.

The third lowest item-average rating was a 5.3 for "Provisions for personal needs of staff" item. Although teachers have the chance to leave early or take a longer lunch break rather than taking breaks in most cases, this is not the case in all of the sample preschools.

The last three lowest average ratings were a 5.3, 5.4, 5,5 for "Opportunities for professional growth", "Room arrangement for play", and "Interactions among children" respectively. Although these were classified as lowest average ratings, their score implies a good quality program that needs some improvement.

Regarding the Arabic Speaking Schools, the following items are the areas which received high scores, along with a description of the average classroom:

- Child-related display 5.8

  Every child needs to know that others value his/her play or work. Children's artwork and other individual work that is created by the children wer displayed in most classrooms at the child's eye-level. This promotes feelings of positive self-esteem and sends the message to the child that his/her work is valued and appreciated

Table 6.12

Early Childhood Environment Rating Scale Results for Lowest and Highest Item-Averages -Arabic Speaking Preschool

Lowest Item-Average Ratings		Highest Item-Average Ratings	
Item Name	**Item-Average Rating**	**Item Name**	**Item-Average Rating**
Provisions for children with disabilities	0.0	Child-related display	5.8
Music/movement	3.8	Schedule	5.8
Opportunities for professional growth	3.8	Greeting/departing	5.4
Using language to develop reasoning skills	3.9	Supervision of gross motor activities	5.3
Dramatic play	3.9	Interactions among children	5.3
Provisions for parents	3.9	Staff interaction and cooperation	5.3

- Schedule 5.8

There was a reasonable balance of activities that foster physical, cognitive, social, and emotional growth in most classrooms. The daily schedule often dedicated adequate amounts of time for play, smooth transitions between activities, and a balance between child-initiated and teacher- directed activities

- Greeting/departing 5.4

Parents and children need a warm, welcoming, and pleasant atmosphere to make the daily greeting and departing routine a happy one. Positive greetings help to promote the children's self-esteem and create a welcoming environment for parents. Children are often greeted in a

personal positive way i.e. (make eye contact and smiles and ask questions)

- Supervision of gross motor activities 5.3)

To prevent accidents and insure safe, active play, gross motor activities in these classrooms were reasonably supervised. Some teachers stood near children while playing to ensure their safety. Most teachers were aware that these activities promote positive social interactions and encourage the development of skills and new experiences.

- Interactions among children 5.3)

Because self-regulation, proper emotional expression, and positive social relationships are such essential skills for later schooling and life, teachers must encourage children to develop acceptable behaviours by providing a setting that encourages real opportunities for initiative taking and competence building. To a reasonable extent the Arabic Speaking preschools promote positive social relationships by providing opportunities for children to work and play together, to solve conflicts in productive ways, and to participate in group activities.

- Staff interaction and cooperation 5.3)

Team spirit and group work is a characteristic of the high quality preschool program. Teachers were found cooperative, helpful and anxious to learn from each other.

A model classroom schedule of one of these preschools observed by the researcher is shown in Appendix 10.

As shown in Table 6.12, the "Provisions for children with disabilities" item received the lowest item- average rating of 0.0. None of

the sample preschools was reported to consider this item in their programs. This could refers to the to the availability of government centres that take care of these children and the high cost of recruiting specialized staff.

The second lowest item-average rating was a 3.8 for "Music/movement" item. Music and movement are valuable means of learning. This item assesses how music, dance, or other movements are incorporated into the regular activities. Children need a supportive environment that includes a teacher and a variety of tools to encourage their self- expression through music and related activities. Unfortunately, this area is limited in some preschools and neglected in others. Musical instruments were unavailable in most of these schools.

The third lowest item-average rating was a 3.8 for "Opportunities for professional growth" item. All preschool teachers in these preschools were reported to be without Specialized Educational Preparation. Not all the teachers need the same training. Unfortunately, training opportunities that include small group workshops, individualized conferencing, observing another teacher, participation in seminars, conducting research, use of technology, and the assignment of a teacher buddy are very limited in these preschools. It is recommended for these preschools to assign a percentage of their base revenue for staff development.

The last three lowest average ratings were a 3.9 for "Using language to develop reasoning skills", "Dramatic play", and "Provisions for parents" respectively.

"Using language to develop reasoning skills" had an item-average of 3.9. This item concentrates on staff discussing logical relationships, introducing concepts appropriately, using actual events and

experiences as a basis for concept development, and encouraging children to explain their reasoning as they solve problems (Harms, et al, 1998). Logical relationships and concepts were rarely presented in appropriate ways. Children learn through interaction with materials and people, both peers and adults, in the context of play and daily routines. Encouraging Children to talk through their thought processes was minimal in these preschools.

"Dramatic play " also had an item-average of 3.9. Dramatic play gives children the opportunity to discover an array of roles and responsibilities. It provides a vehicle through which they make sense of their world. Space, time, props, materials, and supportive teachers enhance dramatic play. Little or no evidence of dramatic play was found in these schools. There were no props for dramatic play indoors or outdoors.

"Provisions for parents" item also received an item-average of 3.9. Good preschools strongly believe in the positive influence of parents on the learning process. They encourage parents to be actively involved in the child's school experience, through attending conferences, joining field trips, visiting at school events, and speaking with their child about school. Such a school provides parents with opportunities to increase their parenting skills by:

- Observing the teacher relating to the children in the classroom

- Attending monthly parenting seminars at the monthly meetings

- Sharing information and experiences about child rearing with other like-minded parents.

In the sample schools visited, very limited occurrences of the above were witnessed. Some preschools offered limited opportunities to help parents become familiar and comfortable with their children's curriculum. Parents were rarely invited to parenting meetings, seminars or field trips.

Chapter six presented the results from testing the third hypothesis of the study. It described the differences between the Arabic and English preschools regarding the teacher's qualifications, experience and duties, ratio of teachers to children, type of curriculum, and provision of stimulating environment. Chapter seven presents the results of the fourth hypothesis of the study. It provides a description of the perceptions of mothers in Qatar regarding traditional and developmental approaches to the education of their young children.

7- CHAPTER SEVEN

MOTHERS' PERCEPTIONS OF THE PRESCHOOL CURRICULUM

7.1 Introduction:

The purpose of chapter seven is to present the results of the fourth hypothesis of the study. It provides a description of the perceptions of mothers in Qatar regarding traditional and developmental approaches to the education of their young children. It describe the differences among the mothers' perceptions regarding the traditional and developmental curriculum goals, content, teaching strategies, and teachers' roles.

Using a descriptive approach, the researcher tried to examine preschool mothers' perceptions regarding the traditional and developmental approaches for the education of their young children. Questionnaires were developed to survey mothers' perceptions of both traditional and developmentally appropriate practices in preschools.. Mothers' perceptions of preschool education in Qatar were investigated by questions regarding curriculum goals, content, teaching strategies, and teachers' roles. 50 mothers from 17 preschools responded to a questionnaire originally developed by Al-Maadadi (Al-Maadadi, 1996) and adapted by the researcher. A Likert Scaling technique was used; the scale rating was "5" for "strongly agree", "4" for " agree", "3" for "undecided", "2" for "disagree" and "1" for " strongly disagree".

Developmental and traditional items were interspersed in all categories without pattern in order to encourage the respondents to assess each item individually. Table 7.1 shows the distribution of developmental

and traditional items among the four categories of the curriculum studied in this chapter.

Table 7.1

The distribution of traditional and developmental items among the four curriculum categories

Category	Traditional Item number	Developmental Item number	Total
Curriculum goals	1,4,7,9	2,3,5,6,8,10	10
Curriculum content	1,3,5,6,10	2,4,7,8,9	10
Teaching strategies	1,3,4,6,9	2,5,7,8,10	10
Teacher's roles	1,5,6,10	2,3,4,7,8,9	10

7.2 Mothers' Perception of the Preschool Curriculum

7.2.1 Mothers' perceptions regarding curriculum goals:

Data on mothers' perceptions regarding curriculum goals are shown in Table 7.2.

As shown in Table 7, all ten items obtained a high percentage of agreement. This indicates that the Qatari mothers value these objectives as part of their children's preschool curriculum.

The item that obtained the highest percentages for agreement is "Develop religious and moral values" at 98%" which reflects the great value the Qatari society gives to the religious activities including the recitation of the Holy Quran and the teachings of Prophet Mohammed. Three other items also obtained a high percentage of 96%: "Socialize and

interact with peers", "Enhance the child's independence and self confidence" , and "Help children achieve a normal emotional growth that leads to self-respect and acceptance".

Table 7.2
Frequencies and percentages of Curriculum goals items

Statement	Strongly agree		agree		undecided		disagree		Strongly disagree	
	N	%	N	%	N	%	N	%	N	%
1. Prepare children to join formal education environment	22	44	23	46	3	6	1	2	1	2
2. Enhance the child's independence and self confidence	31	62	17	34	2	4	0	0	0	0
3. Help children achieve a normal emotional growth that leads to self-respect and acceptance	30	60	18	36	2	4	0	0	0	0
4. Develop academic skills in reading, writing and math	15	30	25	50	4	8	5	10	1	2
5. Stimulate creativity and intellectual exploration	28	56	19	38	2	4	1	2	0	0
6. Socialize and interact with peers	34	68	14	28	1	2	1	2	0	0
7. Enhancing love of homeland and belonging to the Arab Islamic nation	21	42	24	48	4	8	1	2	0	0
8. Develop children's artistic and aesthetic appreciation	32	64	14	28	2	4	1	2	1	2
9. Develop religious and moral values	38	76	11	22	1	2	0	0	0	0
10. Achieve an integrated physical development	21	42	22	44	5	10	2	4	0	0

The items that obtained the lowest percentages are item 4 "Develop academic skills in reading, writing and math" at 80% and item10 "Achieve an integrated physical development" at 86%.

Table 7.3 shows the frequencies and percentages of Curriculum goals items according to their importance in the views of mothers.

Table 7.3
Percentages for frequencies of Curriculum goals items according to their importance

Statement	Strongly agree	agree	undecided	disagree	Strongly disagree	Mean	S.D	χ^2
9. Develop religious and moral values	76	22	2	0	0	4.74	0.487	43.9 *
6. Socialize and interact with peers	68	28	2	2	0	4.62	0.635	58.3 *
8. Develop children's artistic and aesthetic appreciation	64	28	4	2	2	4.50	0.839	72.6 *
2. Enhance the child's independence and self confidence	62	34	4	0	0	4.58	0.575	25.2 *
3. Help children achieve a normal emotional growth that leads to self-respect and acceptance	60	36	4	0	0	4.56	0.577	23.7 *
5. Stimulate creativity and intellectual exploration	56	38	4	2	0	4.48	0.677	42.0 *
1. Prepare children to join formal education environment	44	46	6	2	2	4.32	0.713	32.4 *
7. Enhancing love of homeland and belonging to the Arab Islamic nation	42	48	8	2	0	4.30	0.707	32.7 *
10. Achieve an integrated physical development	42	44	10	4	0	4.24	0.797	26.3 *
4. Develop academic skills in reading, writing and math	30	50	8	10	2	3.96	0.989	39.2 *

The Table above shows the frequencies, means, standard deviation, and chi square estimates for each item. It shows that the chi square estimates are statically significant for all items. This means that all ten items, whether developmental or traditional, obtained high percentages of agreement.

As for the differences between the mothers' perceptions of the developmental and traditional goals in this category, t-test for paired

samples was used. Table 7.4 shows the means, standard deviations of mothers' perceptions of developmental and traditional goals and the t-test for paired samples.

Table 7.4

Means, standard deviations of mothers' perceptions of traditional and developmental goals and the t-test for paired samples

	N	Mean	Std. Dev.	Paired Differences		t-test	Degree of freedom	P
				Mean	Std. Dev.			
Traditional	50	4.330	0.680	- 0.167	0.273	- 4.316	49	0.00
Developmental	50	4.497	0.645					

The Table above shows a significant difference between the mothers' perceptions of traditional and developmental goals in favour of the latter. This indicates that the Qatari mothers' value these goals more than the traditional ones.

7.2.2 Mothers' perceptions regarding curriculum content:

Data on mothers' perceptions regarding curriculum content are shown in Table 7.5

As shown in the Table below, five items obtained a high percentage of agreement. This indicates that the Qatari mothers value these content items as part of their children's preschool curriculum.

Table 7.5
Frequencies and percentages of curriculum content items

Statement	Strongly agree		Agree		Un-decided		Disagree		Strongly disagree	
	N	%	N	%	N	%	N	%	N	%
1. Memorizing Quran	27	54	20	40	1	2	1	2	1	2
2. Playing freely	15	30	22	44	6	12	4	8	3	6
3. Learning to count numbers in sequence	31	62	18	36	1	2	0	0	0	0
4. Learning through activities related to the child's interests	26	52	19	38	4	8	1	2	0	0
5. Memorizing the alphabet	26	54	21	42	2	4	0	0	1	2
6. Colouring and cutting ready-made forms	0	0	12	24	2	4	23	46	13	26
7. Integration of subjects	6	12	10	20	9	18	18	36	7	14
8. Providing activities developing large and small muscles	17	34	24	48	6	12	2	4	1	2
9. Singing and listening to music	22	44	21	42	4	8	2	4	1	2
10. Classifying and grouping objects	25	50	20	40	4	8	1	2	0	0

The item that obtained the highest percentages for agreement is "Learning to count numbers in sequence " at 98%" which reflects the great value the Qatari parents give to the recognition of numerals. A similar result is also shown in item 5 " Memorizing the alphabet" which

shows that 96% of the mothers strongly agree or agree that memorizing the alphabet should be an essential part of the curriculum content. Item 1 "Memorizing Quran" also obtained a high percentage at 94% which again asserts that the Qatari society gives a great value to the religious values and practices. Two other items also obtained a high percentage of 90% ": Learning through activities related to the child's interests ", and "Classifying and grouping objects". This also reflects the great value that the Qatari parents give to these items as part of the preschool curriculum.

The items that obtained the lowest percentages are item 6: "Colouring and cutting ready-made forms" at 24% and item 7: "Integration of subjects" at 32%. This indicates that most mothers don't find that the inclusion of these two content items necessary in the preschool curriculum content. Regarding item 6, mothers may view it as part of instruction in art; therefore, they may want more emphasis on the academic skills rather than teaching art. Yet, it is interesting that 9% of the Qatari mothers are " undecided" on " item 7 " Integration of subjects". It seems that for a large number of mothers in Qatar, the integration of subjects is still seen as a new experience to judge, or they are not sure about the most effective approach in the field of early childhood education.

Table 4 shows the frequencies and percentages of Curriculum content items according to their importance in the views of mothers.

The Table below shows the frequencies, means, standard deviation, and chi square estimates for each item. It shows that the chi square estimates are statically significant for all items. This means that all ten items, whether developmental or traditional, obtained high percentages of agreement.

Table 7.6
Percentages for frequencies and of Curriculum content items according to their importance

Statement	Strongly agree	agree	Un-decided	disagree	Strongly disagree	Mean	S.D	χ^2
3. Learning to count numbers in sequence	62	36	2	0	0	4.60	0.535	27.2 *
1. Memorizing Quran	54	40	2	2	2	4.42	0.810	63.2 *
5. Memorizing the alphabet	54	42	4	0	2	4.42	0.758	39.8 *
4. Learning through activities related to the child's interests	52	38	8	2	0	4.40	0.728	34.3 *
10. Classifying and grouping objects	50	40	8	2	0	4.38	0.725	33.4 *
9. Singing and listening to music	44	42	8	4	2	4.22	0.910	44.6 *
8. Providing activities developing large and small muscles	34	48	12	4	2	4.08	0.900	40.6 *
2. Playing freely	30	44	16	8	2	3.84	1.131	27.0 *
7. Integration of subjects	12	20	18	36	14	2.80	1.262	9.0 *
6. Colouring and cutting ready-made forms	0	24	4	46	26	2.26	1.103	17.7 *

As for the differences between the mothers' perceptions of the developmental and traditional curriculum content in this category, t-test for paired samples was used. Table 7.7 shows the means, standard deviations of mothers' perceptions of developmental and traditional curriculum content and the t-test for paired samples.

Table 7.7 shows a significant difference between the mothers' perceptions of traditional and developmental content in favour of the former. This indicates that the Qatari mothers' value these goals more than the developmental ones.

Table 7.7

Means, standard deviations of mothers' perceptions of traditional and developmental content items and the t-test for paired samples

	N	Mean	Std. Deviation	Paired Differences		t-test	Degree of freedom	P
				Mean	Std. Deviation			
Traditional	50	4.05	0.733	0.27	0.307	6.228	49	0.00
Developmental	50	3.78	0.951					

7.2.3 Mothers' perceptions regarding teaching strategies:

Data on mothers' perceptions regarding curriculum teaching strategies are shown in Table 7.8.

The data indicates that items 2, 7, 8, and 10 obtained the highest percentages in the category of teaching strategies. This may indicate that mothers give great value to " learning by doing", "group work", "children's freedom in choosing the preschool activities" and " free play". As noted, all these four items are considered developmentally appropriate practices in contrast to the traditional practices in items 1, 3, 4, 6 and 9.

The data shown in Table 7.8 also indicates that items 1, 3, 4 and 6 yielded the lowest percentages of mothers' agreement which indicates that an outstanding percentage of mothers disagree on traditional teaching strategies to be part of their children's preschool curriculum.

Yet, it is interesting that 32% of the Qatari mothers are "undecided" on " item 4 "Teaching children of different ages and abilities in the same setting". It seems that for a large number of mothers in Qatar, the inclusive approach is still seen as a new experience to judge, or they

are not sure about the most effective approach in the field of early childhood education.

Table 7.8

Frequencies and percentages of teaching strategies items

Statement	Strongly agree		agree		undecided		disagree		Strongly disagree	
	N	%	N	%	N	%	N	%	N	%
1. Teaching all children the same thing at the same time	7	14	17	34	16	32	8	16	2	4
2. Giving children the freedom to choose their activities	24	48	22	44	2	4	1	2	1	2
3. Teaching children to sit quietly, listen to and obey their teachers	12	24	19	38	7	14	9	18	3	6
4. teaching children of different ages and abilities in the same setting	5	10	11	22	7	14	20	40	7	14
5. Using learning centres and corners for different activities	17	33	19	38	7	14	6	12	1	2
6. Using textbooks and teachers as main sources of knowledge	9	18	19	38	8	16	11	22	3	6
7.Giving a lot of time for children to play with their age mates	21	42	24	48	2	4	1	2	2	4
8. Encouraging group work	23	46	22	44	3	6	2	4	0	0
9. Encouraging memorizing information	14	28	25	50	6	12	3	6	2	4
10. Encouraging learning by doing	22	44	24	48	2	4	2	4	0	0

Table 7.9 shows the frequencies and percentages of Curriculum teaching strategies items according to their importance in the views of mothers.

Table 7.9
Percentages for Frequencies of teaching strategies items according to their importance

Statement	Strongly agree	agree	Un-decided	disagree	Strongly disagree	Mean	S.D	χ^2
2. Giving children the freedom to choose their activities	48	44	4	2	2	4.34	0.823	56.6 *
8. Encouraging group work	46	44	6	4	0	4.32	0.768	32.1 *
10. Encouraging learning by doing	44	48	4	4	0	4.32	0.741	35.4 *
7.Giving a lot of time for children to play with their age mates	42	48	4	2	4	4.22	0.932	52.6 *
5. Using learning centres and corners for different activities	33	38	14	12	2	3.90	1.074	23.6 *
9. Encouraging memorizing information	28	50	12	6	4	3.92	1.007	37.0 *
3. Teaching children to sit quietly, listen to and obey their teachers	24	38	14	18	6	3.56	1.215	14.4 *
6. Using textbooks and teachers as main sources of knowledge	18	38	16	22	6	3.40	1.195	13.6 *
1. Teaching all children the same thing at the same time	14	34	32	16	4	3.38	1.048	16.2 *
4. teaching children of different ages and abilities in the same setting	10	22	14	40	14	2.74	1.242	14.4 *

The Table above shows the frequencies, means, standard deviation, and chi square estimates for each item. It shows that the chi square

estimates are statically significant for all items. This means that all ten items, whether developmental or traditional, obtained high percentages of agreement.

As for the differences between the mothers' perceptions of the developmental and traditional teaching strategies in this category, t-test for paired samples was used. Table 7.10 shows the means, standard deviations of mothers' perceptions of developmental and traditional teaching strategies and the t-test for paired samples.

Table 7.10

Means, standard deviations of mothers' perceptions of traditional and developmental teaching strategies items and the t-test for paired samples

	N	Mean	Std. Deviation	Paired Differences		t-test	d.f	P
				Mean	Std. Deviation			
Traditional	50	3.40	1.088	- 0.82	0.445	- 13.03	49	0.00
Developmental	50	4.22	0.832					

The Table above shows a significant difference between the mothers' perceptions of traditional and developmental teaching strategies in favour of the latter. This indicates that the Qatari mothers' value these teaching strategies more than the traditional ones.

7.2.4 Mothers' perceptions regarding teacher's roles:

Data on mothers' perceptions regarding teacher's roles are shown in Table 7.11.

Table 7.11
Frequencies and percentages of teacher's roles items

Statement	Strongly agree		agree		undecided		disagree		Strongly disagree	
	N	%	N	%	N	%	N	%	N	%
1. Providing an interesting and rich environment that offers children choices	33	66	15	30	1	2	1	2	0	0
2. Encouraging competition among children	21	42	22	44	4	8	2	4	1	2
3. Preparing different levels of activities for children of different abilities and interest	29	58	19	38	1	2	1	2	0	0
4. Preparing a child-initiated environment	34	68	15	30	0	0	1	2	0	0
5. Instruction by giving information	15	30	23	46	1	2	5	10	6	12
6. Interfering and correcting any mistakes directly	26	54	18	36	0	0	1	2	5	10
7. Observing each child's behaviour to learn about him	31	62	17	34	1	2	1	2	0	0
8. Preparing a teacher-initiated environment	16	32	19	38	3	6	5	10	7	12
9. Working closely with parents to help their children	30	60	19	38	1	2	0	0	0	0
10. Emphasising one right answer to each question	15	30	28	54	0	0	2	4	5	10

The data shown in Table 7.11 indicates that items 1, 3, 4, 7 and 9 obtained the highest percentages in the category of teacher's roles. This may indicate that mothers give great value to the developmentally appropriate practices which the above items emphasize. The items that obtain the highest percentages regarding the teacher's role are the following: "Preparing a child-initiated environment" and " Working closely with parents to help their children" at 98%; " Observing each child's behaviour to learn about him", Providing an interesting and rich

environment that offers children choices" and " Preparing different levels of activities for children of different abilities and interests" all at 96%. This may reflect the mothers' acceptance of the non-traditional role of the preschool teacher.

The data shown in Table 7.11 also indicates that items 1, 3, 4 and 5 yielded the lowest percentages of mothers' agreement which indicates that an outstanding percentage of mothers are undecided or disagree on the traditional teacher's roles to be part of their children's preschool curriculum.

The items that obtain the lowest percentages of agreement are item 1 " Preparing a teacher-initiated environment" and item 2 "Instruction by giving information" both at 22%.

Table 7.12 shows the frequencies and percentages of teacher's roles items according to their importance in the views of mothers.

The Table below shows the frequencies, means, standard deviation, and chi square estimates for each item. It shows that the chi square estimates are statically significant for all items. This means that all ten items, whether developmental or traditional, obtained high percentages of agreement.

As for the differences between the mothers' perceptions of the developmental and traditional teacher's roles in this category, t-test for paired samples was used. Table 7.13 shows the means, standard deviations of mothers' perceptions of developmental and traditional teacher's roles and the t-test for paired samples.

Table 7.12
Percentages for Frequencies of teacher's roles items according to their importance

Statement	Strongly agree	agree	Un-decided	disagree	Strongly disagree	Mean	S.D	χ^2
4. Preparing a child-initiated environment	68	30	0	2	0	4.64	0.598	32.9*
1. Providing an interesting and rich environment that offers children choices	66	30	2	2	0	4.60	0.639	55.3*
7. Observing each child's behaviour to learn about him	62	34	2	2	0	4.56	0.644	50.2*
9. Working closely with parents to help their children	60	38	2	0	0	4.58	0.538	25.7*
3. Preparing different levels of activities for children of different abilities and interest	58	38	2	2	0	4.52	0.646	46.3*
6. Interfering and correcting any mistakes directly	54	36	0	2	10	4.18	1.224	32.1*
2. Encouraging competition among children	42	44	8	4	2	4.20	0.904	44.6*
8. Preparing a teacher-initiated environment	32	38	6	10	12	3.64	1.396	20*
5. Instruction by giving information	30	46	2	10	12	3.72	1.325	31.6*
10. Emphasising one right answer to each question	30	54	0	4	10	3.92	1.175	33.0*

Table 7.13
Means, standard deviations of mothers' perceptions of traditional and developmental teacher's roles' items and the t-test for paired samples

	N	Mean	Std. Deviation	Paired Differences		t-test	d.f	P
				Mean	Std. Deviation			
Traditional	50	3.93	1.150	- 0.65	0.737	- 6.218	49	0.000
Developmental	50	4.58	0.591					

The Table above shows a significant difference between the mothers' perceptions of traditional and developmental teacher's roles in favour of the latter. This indicates that the Qatari mothers' value these teacher's roles more than the traditional ones.

7.3 Conclusions

The major conclusions from the above results can be summarized as follows:

- Qatari mothers of Arabic preschools in Qatar prefer the developmental goals be part of their young children's education but within the Islamic religious and moral values.

- Mothers indicated preference for developmental approaches in three out of the four categories of the curriculum.

- Mothers indicated mixed preferences for traditional and developmental approaches with respect to the four categories of the curriculum.

In terms of the first and second conclusions, it has been mentioned before that Islam plays an essential role in all aspects of life in Qatar and that the developmentally appropriate practice is an essential aspect of child development from the Islamic perspective. In addition to the recognition of the importance of child-initiated activities, traditional cultural and social values also affect parents' perceptions of how children should be socialized and educated.

The third conclusion agrees with previous research conclusions (Venkatesan and Menon, 1990; Peshawaria and Venkatesan, 1992; Venkatesan and Vepuri,1992; Venkatesan, 1993) that parents, especially mothers, are confused with regard to several aspects of prevailing curriculum and teaching practices for preschool children. For example, Venkatesan, 1993) found that parents are unsure if preschool curriculum should be structured or unstructured, if one or more teachers should handle a class of preschool children , whether or not a strict regime of time table is to be followed, whether availability of minimum physical space should be made mandatory to run preschool programmes , or if class examinations/tests ought to be conducted periodically etc.

Research suggests that family involvement in education can boost young children's academic success (e.g., Henderson & Berla, 1994; Marcon, 1999;) Compared to non-preschool parents, parents of children who participated in preschool activities had higher occupational aspirations for their children, more satisfaction with their children's school performance, and greater parent involvement in elementary years at home and in school. Preschool factors positively affecting later home and school involvement include the existence, amount, and number of years of preschool, as well as follow-on activities once children reach school age. (Barnard, 2001).

. However, some may argue that it is not reasonable to ask parents about professional aspects such as teaching strategies and teacher's role. The researcher had in mind that a great number of mothers have no contact with their children's teachers nor visit their preschool. Thus the sample of mothers consisted only of those who had the highest level of education and positively involved in the preschool activities. Those were considered competent to formulate conceptions towards the curriculum, teaching methods and teacher's role.

Chapter seven provided a description of the perceptions of mothers in Qatar regarding traditional and developmental approaches to the education of their young children. Chapter eight presents and discusses the findings from testing the four hypotheses of the study. It also provides some implications for practice.

8- CHAPTER EIGHT

SUMMARY AND DISCUSSION OF FINDINGS

The purpose of chapter eight is to summarize and discuss the findings from testing the four hypotheses of the study. It also provides some implications for practice. A number of suggestions and recommendations for those providing direct services and supervision to young children in Qatar is provided at the end of this chapter.

The purpose of this study was to investigate the quality of preschool curricula in the State of Qatar. For the purpose of this study, the researcher used a multi-method approach in collecting and analyzing data. Four research tools were used including:

a- Structured Teacher's Questionnaire: based on the Curriculum Guidance for the foundation stage specified by the Qualifications and Curriculum Authority (QCA, 1999).

b- Structured Teachers' Interviews: these were developed by the researcher to provide information about the type of curriculum used in the preschools sample and to investigate to what extent teachers find the curriculum satisfactory in terms of 12 domains.

c- Structured Classroom Observations: these were used to assess the overall quality of preschool classrooms, the researcher used The Early Childhood Environment Rating Scale, Revised Edition (ECERS -R).

d- Structured Mother's Questionnaire: based on the Curriculum Guidance for the foundation stage specified by the Qualifications and Curriculum Authority (QCA, 1999).

The results of this study will be summarized and discussed according to the research tools used and their findings.

8.1 Teachers' Questionnaire

The teachers' questionnaire investigates to what extent the preschool curriculum in Qatar helps the child's development in the seven domains of the study: mathematical development, knowledge and understanding of the world, creative development, communication language and literacy, personal, social and emotional development, physical development, and the environment. Two hypotheses were formulated to achieve this objective. The following is a discussion of the main findings in terms of the two hypotheses.

8.1.1 Hypothesis One:

"H 1: There are no statistically significant differences among the teachers' evaluative estimates regarding the curriculum's achievement of the child's development in the seven domains".

In terms of the overall average of the seven domains, Table 8.1 shows the percentages of preschool teachers in both the Arabic and the English speaking preschools who believe that the curriculum they use achieve the objectives of each domain.

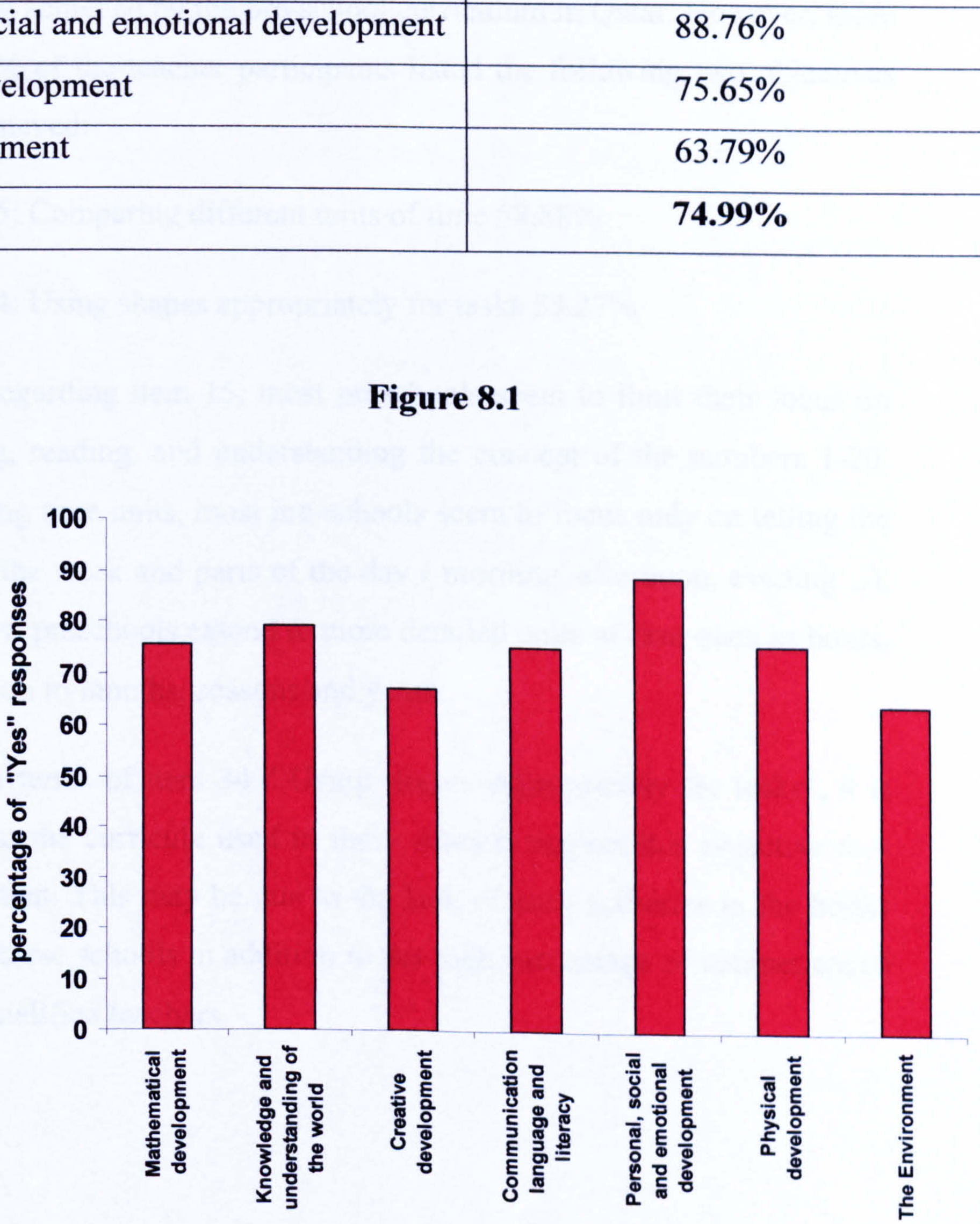
Overall, findings reveal that three quarters of teachers believe that the curriculum they use achieves the objective in the seven domains of the questionnaire. The two domains that scored the lowest percentages and require greater development were the "Creative development" and "The Environment" domains.

Table 8.1

The overall percentages of "Yes" responses regarding the curriculum achievement of objectives

Domain	Percentage of "Yes" responses
Mathematical development	75.65%
Knowledge and understanding of the world	79.01%
Creative development	67.00%
Communication language and literacy	75.05%
Personal, social and emotional development	88.76%
Physical development	75.65%
The Environment	63.79%
Average	**74.99%**

Figure 8.1



Regarding the individual items in each domain, there were some differences among the teachers' responses. The following is a discussion of these items in detail.

8.1.1.1 The First Domain: Mathematical Development:

The results indicate that 26 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar. However, more than 50% of the teacher participants listed the following two objectives as unachieved:

15: Comparing different units of time 58.88%

34: Using shapes appropriately for tasks 53.27%

Regarding item 15, most preschools seem to limit their focus on counting, reading, and understanding the concept of the numbers 1-20. Regarding time units, most pre-schools seem to focus only on telling the days of the week and parts of the day (morning, afternoon, evening...), while few preschools extend to more detailed units of time such as hours, in addition to months, seasons and years.

In terms of item 34 " Using shapes appropriately for tasks", it is clear that the curricula used in these schools neglect this objective to a great extent. This may be due to the lack of such activities in the books used in these schools in addition to the high percentage of inexperienced and unqualified teachers.

8.1.1.2 The Second Domain: Knowledge and understanding of the world:

The results indicate that 31 out of the 35 objectives of this domain are being achieved by the pre-school curriculum. However, more than 50% of the teacher participants listed the following two objectives as unachieved:

5: Understanding the sequence of months and its relation to

birthdays 60.75%

15: Investigating bubble mixture and bubble shapes 55.14%

Due to cultural reasons, birthdays do not have any significant importance in the Arab Muslim societies. According to the Wahhabi Muslim doctrine, celebrating birthdays is a taboo. Thus it is not surprising that this objective was listed as unachieved by Arabic preschool teachers. Regarding the English preschools, the results would not be much more surprising when we remember that a considerable percentage of children in these schools are Arabs.

8.1.1.3 The Third Domain: Creative Development

This domain got the second lowest score as only 67% of the teachers participants stated that the objectives in this domain were achieved by the curriculum they use.

The results indicate that 24 out of the 35 objectives of this domain are being achieved by the pre-school curriculum. However, more than

50% of the teacher participants listed the following 7 objectives as unachieved:

6: Appreciating the work of well known composers 79.44 %

11: Exploring a range of instruments 82.24%

12: Developing awareness of shapes and patterns 61.68%

15: Learning about different Artists' style 76.64

17: Understanding how materials can be joined and hardened 53.27%

26: Learning about role play travel agents and learning about other countries 53.27%

28: Learning about working in an office through role play 55.14%

Again, due to cultural reasons, music does not have any significant importance in the Arab Muslim societies and in the Gulf area in specific. Thus it is not surprising that this objective was listed as unachieved by preschool teachers.

Regarding items 11 and 17, this may be due to the lack of facilities and instruments in many schools.

In terms of items 26 and 28, the curricula used in most preschools seem to neglect these objectives. In the view of some teachers, these objectives are not appropriate for preschool children.

8.1.1.4 The Fourth Domain: Communication Language and Literacy

About three quarters (74%) of teachers believe that the curriculum they use achieve the objectives in this domain Findings suggest that 20 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar. However, more than 50% of the teacher participants listed the following 10 objectives as unachieved:

1: Making up their own poems using a list of words they learned 61.68%

5: Listening to rhymes and making up their own accordingly 52.34%

7: Writing labels and captions 64.49%

10 Understanding how information can be found in non-fiction texts 56.07%

17: Writing a letter using features of letter writing 77.57%

18: Shared reading of a big book non-fiction 65.42%

26: Reading on sight the words of appropriate difficulty 67.29%

27: Reading on sight captions 71.96 %

28: Reading on sight labels 70.09%

30: Writing a book using specified vocabulary 71.96%

32: Discussing the differences between fiction and not fiction book 60.75%

Most of the objectives above are not achieved by the Arabic preschool curriculum. This is possibly due to three main reasons. First, the objectives of preschool curriculum focus primarily on receptive rather than productive reading and writing skills. Another reason is that the Arabic preschool textbooks hardly contain any activities focusing on the communication language skills listed above. Finally, the majority – if not all- of teachers in these preschools did not have any pre-service or in-service preparation as teachers of early childhood.

8.1.1.5 The Fifth Domain: Personal, social and emotional development

This domain got the highest score as about 89% of the teachers participants stated that the objectives in this domain were achieved by the curriculum they use.

The results indicate that 34 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar.

About 48% of the teacher participants listed the seventh objective of this domain" Making critical choices" as unachieved. Surprisingly, all these teachers were from the Arabic speaking preschools which may suggest that this objective is neglected in the curriculum. Referring to the Arabic Preschool objectives and textbooks reveals that there are no signs of statements or activities to achieve this objective.

8.1.1.6 The Sixth Domain: Physical Development

75% of the teacher participants believe that the curriculum they use achieve the objectives in this domain

The results indicate that 29 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar. However, more than 56% of the teacher participants listed objective 30 "Assembling and baking tart" as unachieved. Due to cultural reasons, this might not be surprising considering that most Qatari families depend on home servants and cooks for preparing their meals or on ready-made cakes and sweets. Thus this objective is not culturally related to the Qatari society.

8.1.1.7 The Seventh Domain: The Environment

The results indicate that 18 out of the 35 objectives of this domain are being achieved by the pre-school curriculum in Qatar. However, more than 50% of the teacher participants listed the following 9 objectives as unachieved:

1: A 10 metre square of usable playroom floor space per child 57.01%

7: Music area 64.49%

8: Science area 60.75%

9: Math area 54.21%

13: Woodworking area 56.07%

18: Outdoor private area 58.88%

26: Outdoor digging space 57.94%

27: Variety of digging equipment 57.01%

35: In a field trip a person who knows CPR and First Aid Kit 50.47%

This result would not be surprising considering that the Arabic preschools were originally designed as family residence. Most of these schools lack the physical infrastructure regarding space, equipment and other facilities. This is mainly due to the lack of funding these preschools receive from public and private sectors.

8.1.2 Hypothesis Two:

H 2: There are no statistically significant differences between the English schools and the Arabic schools curricula in:

A. helping to achieve the child's mathematical development
B. building the child's knowledge and understanding of the world
C. helping to achieve the child's creative development
D. fostering the child's communication language and literacy
E. helping to achieve the child's personal, social and emotional development
F. helping to achieve the child's physical development
G. the environment and the availability of facilities and equipment

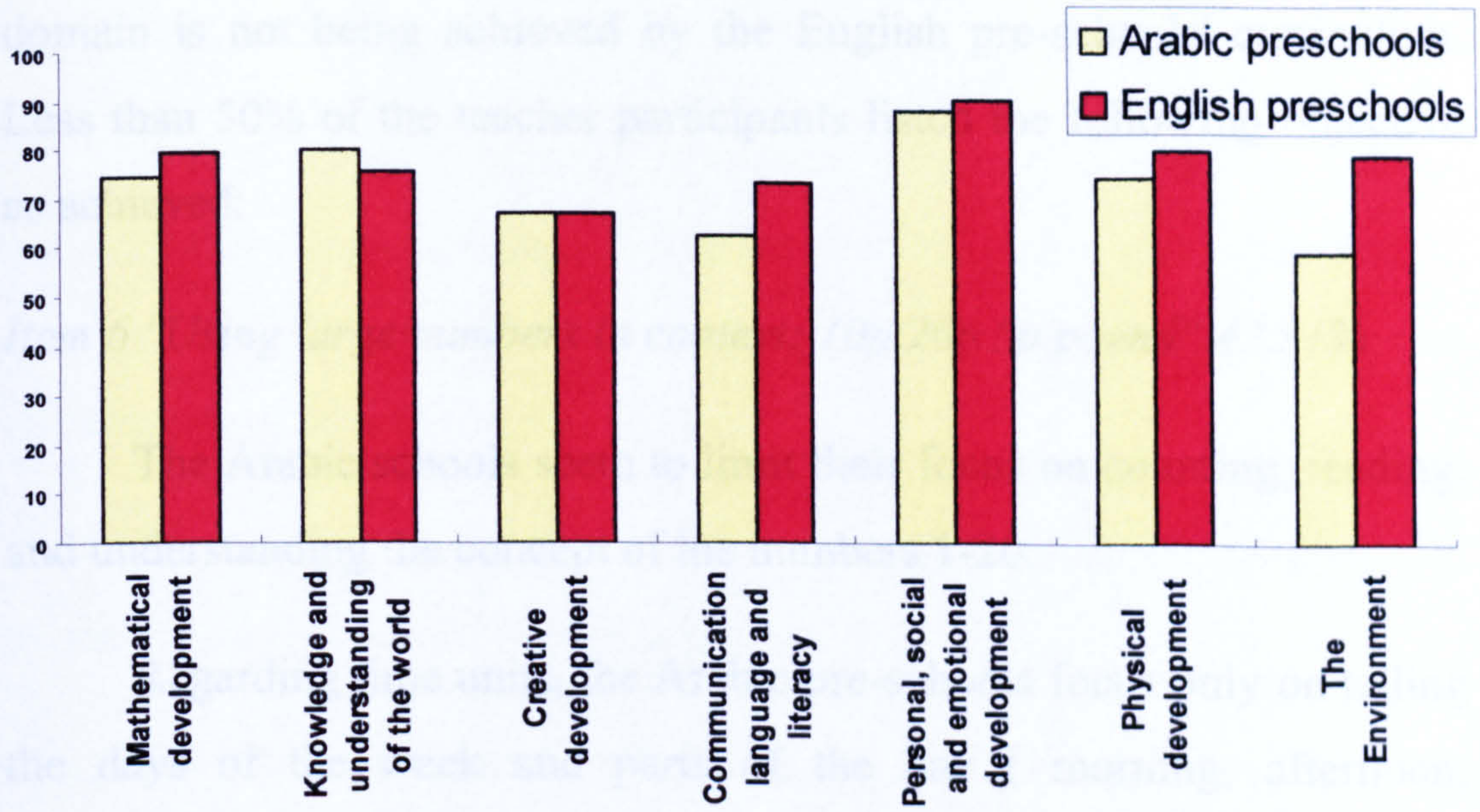
Findings regarding the overall domains suggest slight differences between the two curricula in general except for the environment domain. Table 8.2 shows the percentages of the objectives achieved in each domain in both curricula.

Table 8.2

The percentages of the objectives achieved in each domain in both curricula.

Domain	Arabic preschools	English preschools
Mathematical development	74.32	79.77
Knowledge and understanding of the world	80.24	75.38
Creative development	66.94	67.14
Communication language and literacy	62.39	73.29
Personal, social and emotional development	88.29	90.21
Physical development	74.28	79.89
The Environment	58.90	79.01

Figure 8.2



8.1.2.1 The First Domain: Mathematical Development:

Overall, about 74% of the Arabic preschool sample and 80% of the English preschool sample believed that the curriculum they follow achieve the objective of developing the child's mathematical development. So, it can be said that both preschools met the minimum standard of quality.

However, the results indicate that 3 out of the 35 objectives of this domain are not being achieved by the Arabic pre-schools' curriculum. Less than 50% of the teacher participants listed the following objectives as achieved:

Item 15 " Comparing different units of time ", 35.80%

Item 24 " Recognizing the names of the months of the year" 45.68%

Item 34 " Using developed mathematical ideas and methods to solve practical problems " 39.51%

The results also indicate that one out of the 35 objectives of this domain is not being achieved by the English pre-schools' curriculum. Less than 50% of the teacher participants listed the following objective as achieved:

Item 6 "Using large numbers in context: 10p 20p 5p pound" 42.31%

The Arabic schools seem to limit their focus on counting, reading, and understanding the concept of the numbers 1-20.

Regarding time units, the Arabic pre-schools focus only on telling the days of the week and parts of the day (morning, afternoon, evening...), while the English pre-schools extend to more detailed units of time such as hours, in addition to months, seasons and years.

While the Arabic pre-schools teach children to recognise the months of the year and teach them the four seasons through the 'people experience' books one and two and through certain lessons such as the units of 'clothing' and 'the environment', the English schools teach the months of the year and relate them to certain special occasions and also have more emphasis on the four seasons of the year focusing on the characteristics of each..

Moreover, the English pre-schools teach their children how to solve problems and do some mental mathematics in several ways and children practise them through the year depending on the individual child's development while the Arabic schools do not emphasise mental mathematics or problem solving in their math curriculum. This is due primarily to the lack of qualified administrative and teaching personnel.

8.1.2.2 The Second Domain: Knowledge and understanding of the world:

In general, about 80% of the Arabic preschool sample and 75% of the English preschool sample believed that the curriculum they follow achieve the objective of developing the child's Knowledge and understanding of the world.

Findings suggest that 32 out of 35 objectives are being achieved by the Arabic preschool curriculum.

The results indicate that 2 out of the 35 objectives of this domain are not being achieved by the Arabic pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objectives as achieved:

Item 5 " Understanding the sequence of months and its relation to birthdays ", 29.63%

Item 15 " Investigating bubble mixture and bubble shapes" 37.04%

Regarding the English preschool curriculum, findings suggest that 32 out of 35 objectives are being achieved. Only 2 out of the 35 objectives of this domain are not being achieved by the English pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objectives as achieved:

Item 14 "Learning about the health centre", 42.31%

Item 16 " Observing the similarities and differences between bodies and their shadows" 46.15%

Regarding the sequence of months and its relation to birthdays, the English preschools seem to have more emphasis on birthday issues; they put a picture or a drawing of every child on the classroom wall with his name and birthday date on it. The Arabic preschools, on the other hand, put the children's pictures with their names written on them to make it easy for children to recognise the letters of their names. For cultural reasons, birthdays do not have any significant importance in the Arab Muslim societies.

In terms of Investigating bubble mixture and bubble shapes, the English preschools use bubble mixture 'to show curiosity and interest by facial expression, movement or sound.' (Q.C.A.p86). Bubble shapes are rarely used in the Arabic preschools although they are attractive means that children find interesting and funny.

8.1.2.3 The Third Domain: Creative Development

Overall, about 67% of the Arabic preschool sample and the same percentage (67%) of the English preschool sample believed that the curriculum they follow achieve the objective of developing the child's creative development. So, it can be said that both preschools met the minimum standard of quality.

Findings suggest that 28 out of 35 objectives are being achieved by the Arabic preschool curriculum.

The results indicate that 7 out of the 35 objectives of this domain are not being achieved by the Arabic pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objectives as achieved:

Item 6 *" Appreciating the work of well known composers "*, 17.28%)

Item 10 "*Practising musical skills*", 25.93%)

Item 11 "*Developing awareness of the sounds made by different notes* "11.11%)

Item 12 " *Developing awareness of shapes and pattern*", 23.46%)

Item 15 " *Learning about different Artists' style* " 23.46%)

Item 17 " *Understanding how materials can be joined and hardened* " 45.68%)

Item 28 " *Learning about working in an office through role play* " 44.44%)

Regarding the English preschool curriculum, findings suggest that 32 out of 35 objectives are being achieved. The results also indicate that 7 out of the 35 objectives of this domain are not being achieved. Less than 50% of the teacher participants listed the following objectives as achieved:

Item 6 " *Appreciating the work of well known composers* ", 30.77%)

Item 11 " *Developing awareness of the sounds made by different notes* "38.46%)

Item 15 " *Learning about different Artists' style* " 23.08%)

Item 21 " *Developing awareness of seasonal changes through dance* ", 34.62%)

Item 25 " *Learning about the fire service through imagination play*", 46.15%)

Item 26 "*Learning about role play travel agents and learning about other countries* "30.77%)

Item 28 " *Learning about working in an office through role play* " 46.15%)

Thus, the above mentioned items are the areas which need greater improvement in terms of this domain.

In terms of "Appreciating the work of well known composers ", it is not surprising that the Arabic schools don't achieve this objective for two reasons. First, the Arab Muslim culture does not give great value to music and its composers. The other reason is that most of the Arabic preschools don't hire Music teachers. This may explain the low scores the Arabic preschools got regarding all the items related to music.

Regarding the English preschools, some of them hire Music teachers and make available music instruments for every child to practise and music room, but this is not common in all the English preschools.

8.1.2.4 The Fourth Domain: Communication Language and Literacy

In general, about 62% of the Arabic preschool sample and 73% of the English preschool sample believed that the curriculum they follow achieve the objective of developing the child's communication language and literacy.

The results indicate that 12 out of the 35 objectives of this domain are not being achieved by the Arabic pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objectives as achieved:

Item 1 *" Making up their own poems using a list of words they learned "* 40.74%)

Item 5 " *Listening to rhymes and making up their own accordingly* " 41.98%)

Item 7 " *Writing labels and captions* "28.40%)

Item 10 *" Understanding how information can be found in non-fiction texts* " 43.21%)

Item 11*" Reading a range of familiar and common words independently"* 49.38%)

Item 17 *" Writing a letter using features of letter writing* " 13.58%)

Item 18 *" Shared reading of a big book non-fiction* " 23.46%)

Item 26 *" Reading on sight the words of appropriate difficulty"* 25.93%)

Item 27*" Reading on sight captions* " 19.75%)

Item 28 *" Reading on sight labels* " 20.99%)

Item 30 *" Writing a book using specified vocabulary* " 27.16%)

Item 32 *" Discussing the differences between fiction and not fiction book* " 34.57%)

The results also indicate that 2 out of the 35 objectives of this domain are not being achieved by the English pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objectives as achieved:

Item1"Making up their own poems using a list of words they learned", 30.77%)

Item10 "Understanding how information can be found in non-fiction texts" 46.15%)

The English preschools were found to have more focus on the four language skills: listening, reading, speaking and writing than the Arabic preschools did.

It was obvious that children in the Arabic preschools are good listeners and they repeat what the teacher is saying and retell the story she reads. This relates to the earlier reference to the role of

memorization. No further reading activities follow and no occurrence of independent reading was observed. More interestingly, the children can hardly read their names and some simple words related to the five experience curriculum.

In the English preschools, on the other hand, children listen with enjoyment, respond to stories, songs, rhymes and poems and make up their own stories, songs, rhymes and poems. Negotiating plans and activities and taking turns in conversation are important components of the curriculum. Moreover, children read a range of familiar and common words and simple sentences independently, show understanding of the elements of stories, such as main character, sequence of events, and openings, and how information can be found in non-fiction texts to answer questions about where, who, why, and when. Unfortunately, such activities were not observed in the Arabic preschools.

Interestingly, it was observed that the Arabic preschool curriculum neglects individual differences in language abilities; the same tasks are given to all children without considering individual abilities and skills. In the English preschools curriculum, on the other hand, individual differences are met in all aspect of the curriculum; every child is given the opportunity to achieve progress according to his level and abilities. For example, the students are told to read a story almost every day. Some talented children are asked to extend to writing his own short story related to the topic he or she read while others can only respond to the story orally.

In terms of the writing skill, the English curriculum requires children to write simple words, sentences for different purposes such as lists, stories, and instructions while the Arabic curriculum requires

children only to write their names and a few simple words from the experience curriculum.

8.1.2.5 The Fifth Domain: Personal, social and emotional development

Overall, about 88% of the Arabic preschool sample and 90% of the English preschool sample believed that the curriculum they follow achieve the objective of developing the child's personal, social and emotional development. So, it can be said that both preschools met the minimum standard of quality in this domain.

The results indicate that one out of the 35 objectives of this domain is not being achieved by the Arabic pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objective as achieved:

Item 7 " Making critical choice" 48.15%)

Regarding the English preschool curriculum, findings suggest that all the objectives in this domain are being achieved.

The direct teaching method is the most common in the Arabic preschools. The daily schedule depended on one teacher teaching the whole class and deciding what kind of activity they should do and the whole class does this activity. Except for the break time, children are mostly listening and following the teacher directions. Children are rarely given the chance or encouraged to make a choice critically. The skill of discussion is often neglected in theses preschools.

Regarding the English preschool curriculum, findings suggest that all the objectives in this domain are being achieved.

8.1.2.6 The Sixth Domain: Physical Development

In general, about 74% of the Arabic preschool sample and 80% of the English preschool sample believed that the curriculum they follow achieve the objective of developing the child's physical development. So, it can be said that both preschools met the minimum standard of quality.

The results indicate that 5 out of the 35 objectives of this domain are not being achieved by the Arabic pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objectives as achieved:

Item 4 " Handling instruments with confidence ", 46.91%)

Item 21 "Handling bats and balls with increasing control" 49.38%)

Item 28 " Exploring the concept of being upside down "49.38%)

Item 29 " Developing balance using skipping rope ", 49.38%)

Item 30 " Assembling and baking tart", 23.46%)

The results also indicate that one out of the 35 objectives of this domain is not being achieved by the English pre-schools' curriculum. Less than 50% of the teacher participants listed the following objective as achieved:

Item 30 " Assembling and baking tart ", 46.15%)

It is important to note that while most of the English preschools hire a qualified P.E teacher, none of the Arabic preschools does. So it is not surprising to find that a number of objectives related to using muscles and handling instruments are not achieved. It was observed that instruments are not frequently used by children in these schools.

It is clear that the Arabic preschools do not emphasise physical development as the English preschools do neither in their documents nor in application.

8.1.2.7 The Seventh Domain: The Environment

Overall, about 59% of the Arabic preschool sample and 79% of the English preschool sample believed that the curriculum they follow achieve the objective of developing the child's environment. Thus, it can be said that English pre-schools' curriculum has a better quality than the Arabic pre-schools' curriculum in terms of this domain.

The results indicate that 12 out of the 35 objectives of this domain are not being achieved by the Arabic pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objectives as achieved:

Item 1 " A 10 metre square of usable playroom floor space per child ", 37.04%)

Item 7 " Music area ", 25.93%)

Item 8 " Science area "35.80%)

Item 9 " Math area ", 35.80%)

Item 13" Woodworking area " 48.15%)

Item 18 " Outdoor private area " 30.86%)

Item 19 " Soft elements in the environment such as rugs, cushions, rocking chairs " 39.51%)

Item 26" Outdoor digging space " 34.57%)

Item 27 " Variety of digging equipment " 35.80%)

Item 30 " Balancing equipment " 49.38%)

Item 34 " A pre-school person for all time knows First Aid" 44.44%)

Item 35 "In a field trip a person who knows CPR and First Aid Kit " 37.04%)

The results also indicate that only one out of the 35 objectives of this domain is not being achieved by the English pre-schools' curriculum in Qatar. Less than 50% of the teacher participants listed the following objective as achieved:

Item 13 " Woodworking area" 30.77%)

An important indicator of quality is the variety of experiences an facilities available in the preschool environment. The above findings suggest that the English preschools had many different types of activities and facilities available to children. Most classrooms had learning centres for art activities, home living, manipulatives usually small toys that develop fine motor and reasoning skills, e.g., sorting toys, links, Lego's, puzzles, music, and reading. Many also had areas for dramatic play and dress-up, listening audio equipment, and science activities. The Arabic preschools on the other hand, lack a lot of these activities and facilities which are considered necessary for the appropriate development of the child.

One of the most obvious drawbacks of all the Arabic preschools is the school building. None of them were originally designed to be schools. Most of them are rented villas which were designed as family

residence. Most of the English schools, on the other hand, were originally designed to be schools.

Thus, the English preschools have many advantages over the Arabic preschools in terms of the availability of learning facilities. For example, the spaces are well designed and assigned. Most of these schools classroom have several places such as: play room, sleep room, lunch room, storage, meeting room, music room, gymnasium, art room, block centre, drama area, library and science centre. Bathrooms are very near to the classroom, the length and the size of the bathroom facilities are adequate to the child size. The classroom has an attractive pattern; the colours and the texture are mixed very well and pleasing to look at. Widows are to the level child; the windows are regularly cleaned and maintained. Moveable furniture is another characteristic of most of these schools. The school have an uncarpeted area where the children can do a lot of activities. They create an environment where the place, furniture, and materials are safe and monitored all the time while most of the Arabic preschools do not.

The previous results indicate that culture plays an overwhelming role in the preschool curriculum and application especially in the Arabic speaking preschools. The curriculum is strongly oriented towards the upbringing of children in relation to the local environment. Transfer of culture and values adapted to local social environments is seen as a central task. Learning is seen as part of the child's upbringing, which includes a strong emphasis on Islamic norms and values in the social competence of daily life today. Emphasis is placed on the process of child rearing and transmission of culture. The English speaking preschool curriculum, on the other hand, is more cognitively oriented towards children's learning. The perspective is to a larger extent on children's

development of skills and abilities. Skills and values are therefore relevant to what society's general needs are in the future. The curriculum emphasis is placed on the product as a result of learning skills and abilities through mediation of knowledge believed to be needed in the future, while the Arabic speaking preschools curriculum emphasis is placed on the process of growing up in society today built on its historical roots and traditions.

8.2 Teachers' interviews

The findings suggest a significant difference between the Arabic speaking preschool teachers and the English speaking preschool teachers in terms of their teachers' qualifications, experience and duties all in favour of the latter. Unfortunately, the findings also indicate that the Arabic speaking preschools are of lower quality in terms of all domains of the interview.

Regarding **teachers' qualifications**, findings suggest that the Arabic speaking preschool teachers are poorly educated compared the English speaking preschool teachers. For example, none of Arabic speaking preschool teachers had an Early Childhood Education degree compared to 93.8% of teachers in the English speaking preschools.

In terms of **experience**, the Arabic speaking preschool teachers had lesser experience in the field than the English speaking preschool teachers had. The Arabic speaking preschool teachers worked in the field for an average of 6.5 years while the English speaking preschool teachers had worked for an average of 12 years.

In addition to teaching, all teachers in the Arabic speaking preschools responded that they had other **duties**. For example some of them had administrative duties as programme directors, office managers, secretaries or school-trip leaders. In addition, no teacher assistants were found in these schools. In the English speaking preschools, on the other hand, every teacher had an assistant or two and did not have any administrative duties in most cases.

Regarding **wages**, the Arabic speaking preschool teachers are much more poorly paid compared to the English speaking preschool teachers. As a result a growing number of preschool teachers are resigning because of low wages, heavy workloads and poor working conditions. This leads to high turnover in the Arabic speaking preschools which is likely to affect quality in terms of curriculum continuity and progression.

Findings also show the average observed **teacher–child ratio** in the Arabic speaking schools was approximately 1:25 compared to a ratio averaged 1:16 in the English speaking preschools. Considering that most research studies (Word,1999; Finn,2001) provide compelling evidence that small classes in the early stages are academically superior to regular-size classes, it is easy to conclude that the large class size in the Arabic speaking schools have a negative effect on the child's interaction and development. The research evidence emphasizes that smaller classes result in better quality interactions between the teachers and the learners and this is particularly significant for early years settings.

Regarding the **type of curriculum** followed, the Qatar Experiential Curriculum is the most common in the Arabic speaking preschools while the British National Curriculum is the most common in

the English speaking preschools. Although both curricula are based on sound educational theory, are child-centred in approach and focus on integrated learning, the every day interpretation and application does not necessarily reflect theory. Cultural factors in general and teachers' beliefs in particular have a clear-cut impact on the curriculum and its implementation. For example, Arab culture sees the world as "doing things to people" while the Western society takes the view that people "act on the world." Thus, a teacher in the West may be more likely allow children to choose their own activities; in the Arab society, teachers believe they should arrange activities for children and direct their work. Furthermore, children and parents in the Arab society hold the teacher in high esteem and believe they should not question her/his plan.

Another example is memorization. Memorization plays an important role in the Arabic speaking preschools. As religious education is fundamental to the whole learning experience, it is common in all these preschools to see the children reciting the Quran from memory. As they repeat after their teacher, sometimes in unison, sometimes individually, they join a centuries-old practice of training young children to commit Islam's holy book to memory.

To many western observers, the practice may seem archaic—a form of rote learning and indoctrination that offers little of educational value. But the majority of teachers in the Arabic speaking preschools believe the Quranic lessons provide a valuable foundation for later learning. Moreover, memorization has a place in acquiring certain facts and information (e.g. names, dates) and it is an economical way to, for example, learn letter combinations, or multiplication tables.

There were clear-cut differences between the two preschool curricula in terms of the **teaching approaches** emphasized in each. The English speaking preschools emphasized child-initiated activities in which young children pursued their own interests with staff support. The Direct Instruction approach, in contrast, which focused academics study and required young children to respond to rapid-fire questions posed by teachers, was the most common approach followed by the Arabic preschool teachers.

Regarding the **appropriateness of the curriculum** used in terms of achieving the desirable outcomes, the majority of teachers in both types of schools found the curriculum appropriate with an average of 78% of the Arabic preschools and 94% of the English preschools. However an average of about 30% of the Arabic speaking preschool teachers found that the curriculum followed is inappropriate in terms of three domains: promoting interactive learning and encouraging the child's construction of knowledge, its sensitivity to and respect of cultural and linguistic diversity, and its achievement of social, emotional, physical, and cognitive goals. This may suggest that the Arabic speaking school teachers are less satisfied with the curriculum they follow than the English preschool teachers are.

8.3 Classroom observations

Findings from the classroom observations imply that the quality of English speaking preschool classrooms is of higher quality than that of the Arabic speaking preschool classrooms in general. A comparison of overall mean ECERS scores between two samples of preschool classrooms shows that English speaking preschool classrooms have a higher mean ECERS score. The overall mean ECERS score for the

English speaking preschool sample was 6.00 for a sample of 16 classrooms, as compared to 4.8 for a sample of 18 Arabic speaking classrooms in Qatar.

On the ECERS-R, the Arabic schools average ratings ranged from a low of zero to a high of 5.8 while the English schools average ratings ranged from a low of 3.2 to a high of 6.7. Twenty-eight (65.1%) of the 43 average ratings were below 5.0 in the Arabic schools suggesting the "inadequate" quality of programmes in Arabic speaking preschools, however, only one item (2.3%) had average rating of 5.0 or less. On 42 items, English speaking classrooms' average score was above 5, which means they exceeded the "good" standard.

Regarding the main subscales of the ECERS-R, the Arabic Speaking Schools were below 5.0 in six out of the seven subscales: "Space and Furnishings," "Personal Care," "Language-Reasoning," "Activities," "Programme Structure," and "Parents and Staff." which suggest the "inadequate" quality in these subscales. The English speaking preschools, on the other hand, were above five in the seven subscales.

Overall, it can be concluded that the Arabic pre-schools don't meet basic conditions for providing a safe, healthy and stimulating environment while the English speaking preschools have adequate materials and supplies, are led by well-trained teachers who are knowledgeable of developmentally appropriate practice, and provide a variety of experiences to children to promote their healthy development

8.4 Mother's Questionnaire

Mothers' perceptions of preschool education in Qatar were investigated by questions addressing curriculum goals, content, teaching strategies, and teachers' roles.

8.4.1 Mothers' Perception of the Preschool Curriculum

The findings suggest a significant difference between the mothers' perceptions of traditional and developmental goals in favour of the latter. This indicates that the Qatari mothers' value these goals more than the traditional ones.

8.4.2 Mothers' perceptions regarding curriculum content:

The findings suggest a significant difference between the mothers' perceptions of traditional and developmental content in favour of the former. This indicates that the Qatari mothers' value these goals more than the developmental ones.

8.4.3 Mothers' perceptions regarding teaching strategies:

The findings suggest a significant difference between the mothers' perceptions of traditional and developmental teaching strategies in favour of the latter. This indicates that the Qatari mothers' value these teaching strategies more than the traditional ones.

8.4.4 Mothers' perceptions regarding teacher's roles:

The findings suggest a significant difference between the mothers' perceptions of traditional and developmental teacher's roles in favour of the latter. This indicates that the Qatari mothers' value these teacher's roles more than the traditional ones.

From the above results it can be concluded that Qatari mothers of Arabic preschools children in Qatar prefer the developmental goals be part of their young children's education but within the Islamic religious and moral values. Although mothers indicated mixed preferences for traditional and developmental approaches with respect to the four categories of the curriculum, they indicated preference for developmental approaches in three out of the four categories of the curriculum.

Although the experiential curriculum is the formally adopted approach in early childhood education in Qatar, the roles, methodologies and practices observed in these preschools seemed to be teacher-centred rather than child-centred. The Qatari preschools, in general, follow the traditional academic approach based on the behaviourist theory. This approach is intended to prepare children for further academic instruction.

In summary, the traditional academic approach does not provide a developmentally appropriate environment for preschool children and is no longer considered by educational theorists as an appropriate model for for early childhood education in many countries of the world. Therefore, the curriculum and environment should be designed to meet the needs of the "whole child" viewing the child as a positive interactive human being.

8.5 Implications for practice

The first general conclusion that can be drawn from the findings is that, in many ways, the Arabic and English speaking preschool teachers' evaluation of the curricula they used looked remarkably similar even though some significant differences were found regarding specific areas in favour of the English speaking preschools. In addition, for the most

part, both curricula in the study maintained a level of quality that could be characterized as adequate except for the environment domain which requires the most development in the Arabic speaking preschools.

Based upon the findings in this study and our concerns about early childhood education and curriculum practices, the researcher has generated a number of suggestions and recommendations for those providing direct services and supervision to young children especially in the Arabic speaking preschools.

Recommendation 1:

More programmed and systematic government supervision and inspection plans are needed to ensure that each preschool provides the necessary conditions and requirements to deserve licencing. This includes the buildings, facilities, equipment, class size, teachers, administrators, curricula and others.

In the UK and as part of the recent developments in early childhood education, the government introduced inspection of preschool settings by the Office for Standards in Education (OFSTED). OFSTED is a non-ministerial governmental department, independent of the Department of Education and Skills, responsible for inspecting all schools and early years' provision receiving government funding in England. It is also responsible of teacher training in universities. The aim of the OFSTED's inspection process is to assure government, parents, and the public that funded nursery education is of acceptable quality (OFSTED, 2001). Every type of preschool setting that wishes to accept government funding is required to undergo an inspection by OFSTED.

This inspection assesses the extent to which the preschool settings are working towards the Early Learning Goals.

The inspectors use a variety of ways to arrive at their judgments, including observation of activities, examination of resources, review of documentary evidence, and discussion with the staff and children. At the end of the inspection period, the lead inspector presents oral feedback on the inspection, and within four weeks, the preschool receives the inspection report. It is significant that the inspection report is a public document and available on the Internet. If the preschool setting does not meet the inspection requirements, funding may be withdrawn. Thus, early years educators feel great pressure to promote particular and pre-specified learning outcomes.

Although this system of inspection is criticized for its focus on learning things by rote, colour in worksheets, and generally being passive in many learning situations (see Smidt, 2002), it could be adjusted for use in Qatar.

Recommendation 2:

The Arabic preschool curriculum needs to be revised and modified to ensure that it considers all aspects of the child's development including knowledge and understanding of the world, creative development, communication language and literacy, mathematical development, personal, social and emotional development and physical development.

The new dramatic changes like more openness in the economy, entrepreneurship, democracy and educational reform which the country has witnessed in the last four years have decreased the effect of cultural

and social constraints. The goal of educational reform which is introduced and monitored by the Supreme Education Council is to build a modern, world-class school system to provide Qatari children from preschool to Grade 12 with a high quality education comparable to that offered in the best schools around the globe.

Reform is based on four principles: autonomy, accountability, variety and choice. Autonomy encourages new Independent Schools to be innovative and improve student outcomes. Accountability, through national assessments, ensures compliance and measures progress. Variety ensures that a number of schooling alternatives are available to parents and students. Choice will allow parents to pick the schooling option best suited to their child.

Twelve Independent Schools were opened in September 2004, with additional schools to be opened in subsequent years. Independent School operators were selected through a rigorous application and approval process conducted by the Education Institute of the Supreme Education Council, which regularly monitor and support the schools.

The Arabic preschool curriculum also needs more emphasis on language and literacy in both oral and written forms. More emphasis is also needed on developing mathematical skills such as observing, measuring, predicting and problem solving.

There is an obvious shift in the new preschool curriculum guided by the SEC standards towards more academically oriented preschools. With this change of perspective, there is a risk that the staff might begin to treat preschool as school. There are, of course, examples of these kinds of school-like preschools both indifferent countries. To avoid this development, it is important for preschool teachers to implement the new

curricula without losing the heart of the preschool tradition, which takes a great deal of training. Preschool teachers have to understand the child's perspective but also understand a new theoretical perspective on learning and knowledge formation. In other words, teachers have to learn about children from children. Teachers also have to learn about the mandate of society, as it is formulated in the curriculum and other official documents. They have to create their own understanding of how the new plans differ from the earlier curriculum. They have to, for example, turn central concepts like democracy (as well as play and learning) upside down and discuss them from a theoretical as well as a practical point of view. Finally, preschool teachers have to learn about themselves—to learn about how to become aware of their own values and beliefs, and how these are influencing everyday interactions with children.

Recommendation 3:

The Arabic preschool physical environment needs a lot of modification if a safe, healthy, motivating and educationally appropriate preschool is to be created. In addition, classrooms should have a proper math area with suitable equipment. The book area should have suitable books for the children ages that they can hold and read. English preschool books and stories should be translated because of the rarity of Arabic books for the pre-school age.

Recommendation 4:

Each group of children in an early childhood education programme should be assigned teachers who have a bachelor's degree with specialized education related to early childhood e.g., developmental psychology, early childhood education, early childhood special education.

Achieving this goal will require a significant public investment in the professional development of current and new teachers. Sadly, there is a great disjunction between what is optimal pedagogically for children's learning and development and the level of preparation that currently typifies early childhood educators. Progress toward a high-quality teaching force will require substantial public and private support and incentive systems and compensation commensurate with the expectations of college graduates.

Recommendation 5:

Education programmes for teachers should provide them with a stronger and more specific foundational knowledge of the development of children's social and affective behaviour, thinking, and language. This foundation should be linked to teachers' knowledge of mathematics, science, linguistics, literature, etc., as well as to instructional practices for young children. Developing a national curriculum for early years teacher training is strongly recommended as the results of the study suggest that the teachers in the Arabic preschools are poorly qualified as preschool teachers.

Recommendation 6:

Teacher education programmes should require mastery of information on the pedagogy of teaching preschool-aged children, including knowledge of teaching and learning and child development and how to integrate them into practice focusing on teaching for understanding rather than just for rote recall and memorization which is a common practice in the Arabic school system.

Recommendation 7:

All early childhood education programmes should have access to a qualified supervisor of early childhood education. Teachers should be provided with opportunities to reflect on practice with qualified supervisors. This supervisor should be both an expert teacher of young children and an expert teacher mentor. Such supervisors are needed to provide in-service collaborative experiences, in-service materials including interactive videodisc materials, and professional development opportunities directed toward improvement of early childhood pedagogy. In the UK, for example, the local education authorities appoint educational advisors who have subject or pedagogy responsibilities. Their role is to work with schools and teachers in the way mentioned above.

Recommendation 8:

The Ministry of Education and other institutions and organisations interested in young children and their families should initiate programmes of research and development aimed at learning more about effective preparation of early childhood teachers.

Recommendation 9:

The Ministry of Education and other institutions and organisations interested in young children should fund efforts to develop, design, field test, and evaluate curricula that incorporate what is known about learning and thinking in the early years, with companion assessment tools and teacher guides. Each curriculum should emphasize what is known from research about children's thinking and learning in the area it addresses.

Recommendation 10:

All preschools should develop programme standards for early childhood programmes and monitor their achievement. These standards should recognize the variability in the development of young children and adapt preschool and primary programmes to this diversity.

Recommendation 11:

The government should fund well-planned, high-quality centre-based preschool programmes for all children including those at high risk of school failure. Research has shown that high quality early childhood care and education has a particularly significant impact on children at risk of school failure. Such programmes can prevent school failure and significantly enhance learning and development in ways that benefit the entire society.

Recommendation 12:

Organizations and government bodies concerned with the education of young children should actively promote public understanding of early childhood education and care. Parents and other caregivers, as well as the public, should be the targets of such efforts.

Recommendation 13:

Early childhood programmes and centres should build alliances with parents to cultivate complementary and mutually reinforcing environments for young children at home and at the preschool environment.

Recommendation 14:

A broad empirical research programme is recommended to better understand the range of inputs that can contribute to supporting environments that nurture young children's eagerness to learn; and to better understand the development of children's capacities in the variety of cognitive and socio-emotional areas of importance in the preschool years, and the contexts that enhance that development;

Recommendation 15:

The next generation of research must examine more rigorously the characteristics of programmes that produce beneficial outcomes for all children. In addition, research is needed on how programmes can provide more helpful structures, curricula, and methods for children including those at high risk of educational difficulties.

Recommendation 16:

To support parent involvement and prevent fade-out of family involvement in preschools and the elementary grades, the researcher has generated a number of mechanisms for both early childhood programs and schools to be provided for continuous family involvement these include:

- Develop procedures for monitoring children's progress and achievement. Baseline assessment, for example, enables teachers to plan the curriculum appropriately and to provide learning activities that match each child's needs. It also provides a starting point from which school and parents can measure and monitor a child's progress. This lets them check whether children are achieving as well as they should, as they move up the school.

- Host a wide array of special events prior to the start of preschool at an early childhood setting—such as picnics, and preschool fairs. These transition-focused gatherings often have school staff, such as teachers, principals, institutions' representatives, and parent liaisons present to meet parents and answer parents' questions.

- Make use of routine meetings and materials, such as parent-teacher conferences, newsletters, and bulletin boards, to convey information about the child's academic and social readiness, the schools and teachers, registration dates, and other information.

- Create portfolios, memory books, and other concrete collections of children's experiences to document children's strengths and weaknesses for parents, as well as to assist in their sense of closure from the program.

- Encourage peer networking among parents, creating buddy lists and opportunities for parents to meet others who have same-age children entering the same school, or who have already been through the transition experience with an older child.

- Offer reassurance to parents regarding their parenting abilities and the normality of their anxious feelings about their child's transition into school.

- Personalize the school and teacher in a variety of ways, by posting photographs of the classrooms and preschool teachers, by having preschool children make invitations for preschoolers to visit their class in advance, or by sharing information about specific teachers' styles.

These suggested practices provide information, boost parents' efficacy, create involvement opportunities, and begin to build trusting relationships. Schools and early childhood programs can employ practices like these to respond to parents' feelings of anxiety and excitement, promote their sense of welcomeness and familiarity with schools, provide valuable information about their child and how to support his or her transition, and bolster parents' sense of confidence in them as parents and their ability to recognize involvement opportunities. Perhaps most importantly, these suggested practices model collaboration across early childhood programs, schools, communities, and families.

Chapter eight provided a summary and discussion of the findings from testing the four hypotheses of the study. It also provided a number of suggestions and recommendations for those providing direct services and supervision to young children in Qatar. Chapter nine is a conclusion of the study.

9- CHAPTER NINE

IN CONCLUSION

In this study I have tried to explore the quality of preschool curricula in the state of Qatar using four major research tools: structured teacher's questionnaire, structured teachers' interviews, structured classroom observations and structured mother's questionnaire.

In the context of Qatar, this is an important issue because no previous research studies have been made before to investigate the quality of early childhood education in the country. On the other hand, there has been great evidence from research in the last decade that quality preschool education has positive effects on future success of children.

The results of the **teacher's questionnaire** show that the English preschools have many advantages over the Arabic preschools in terms of all the seven domains of the teacher's questionnaire. The most obvious drawbacks of all the Arabic preschools are in the following three domains: Creative Development, Communication Language and Literacy, and the Environment (the availability of learning facilities).

The results of **teachers' interviews** also show that the Arabic speaking preschools are of lower quality in terms of all domains of the teacher's interview. These include: teachers' qualifications, experience, duties, wages, teacher–child ratio, type of curriculum, teaching approaches, appropriateness of the curriculum.

The results of **classroom observations** also show that the quality of English speaking preschool classrooms is of higher quality than that of the Arabic speaking preschool classrooms in general. A comparison of overall mean ECERS scores between two samples of preschool classrooms shows that English speaking preschool classrooms have a higher mean ECERS score. The overall mean ECERS score for the English speaking preschool sample was 6.00 for a sample of 16 classrooms, as compared to 4.8 for a sample of 18 Arabic speaking classrooms in Qatar.

The results of **mother's questionnaire** show that mothers of Arabic preschools children in Qatar prefer the developmental goals rather than traditional goals be part of their young children's education but within the Islamic religious and moral values. Although mothers indicated mixed preferences for traditional and developmental approaches with respect to the four categories of the curriculum, they indicated preference for developmental approaches in three out of the four categories of the curriculum.

The results above leads to the conclusion that the Arabic speaking preschool curriculum in Qatar suffers from obvious drawbacks in all the domains studied which requires serious consideration from the Ministry of Education and other institutions and organisations interested in early childhood education.

As a study it has raised further questions for research, particularly:

1. Does early childhood education in Qatar prepare children for further education?

2. Has quality of preschool education in Qatar increased steadily and significantly over time?

3. Do children who attend English speaking preschools score significantly higher on measures of skills and abilities deemed important for success in preschool than children who attend Arabic speaking preschools?

4. How do cultural factors influence the preschool curriculum in Qatar?

5. Is there a significant correlation between educational performance at school and the quality and length of involvement in early childhood education?

6. How do wages, working conditions, staff feelings about the preschool they work in, and staff feelings about child care as a career affect the quality of early childhood education?

7. Does parental involvement in preschool education have a positive influence on a child's future achievement?

If this study was repeated, I would focus in more detail on investigating parents' perceptions of the quality of preschool education in terms of reasons for wanting their children to attend preschool and their choice of preschool. Responses would be categorized according to: (1) socioeconomic characteristics of the parents; (2) factors in the choice of preschool such as qualified staff, good facilities, individual attention, a strong academic program, emphasis on language learning, and a good academic reputation; (3) choice between English and Arabic speaking preschools; (4) parents' reasons for sending children to preschool; and (5) parental expectations. It is essential that parents' voices in terms of the

categories above continue to be heard and integrated in the ongoing development of preschool curriculum.

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APPENDIX

Appendix 1 (Map of Qatar)

Appendix 2 (The Philosophy of Pre-school in the State of Qatar)

The preschool curriculum in the state of Qatar adopts a philosophy based on providing children with the opportunities to do tasks and activities that develop their skills and social behaviour under an adequate educational supervision and direction. This philosophy focuses on:

1. Respecting the child and giving him the opportunities to express himself and let him do the activities without unnecessary interruption
2. Ensuring the child independence and self confidence to help him build his own personality
3. Giving the child the freedom to do what he wants to do without disturbing others and under the teacher's guidance and observation.
4. Keeping a balance between quantity and the quality concerning what is being introduced to the child.
5. Considering the development of the child intellectually, physically, socially and emotionally according to his age group characteristics.
6. Considering the preschool a normal extension from home and a step towards the primary school.
7. Harmonizing with the Islamic doctrine and the original Arab culture so that it will gain the society's satisfaction and support.
8. Following up the latest theories of education in general and child raring in specific. **(Ministry of Education, Annual Report (2001-2002), pp.9-10)**

Appendix 3 (The general aims of pre-schools in Qatar)

1. Raising children on the belief in God , love of Islam and sticking to its principles and values
2. Enhancing love of homeland and belonging to the Arab Islamic nation.
3. Providing language skills such as listening, comprehension and speaking through adequate interactive activities
4. Developing children's readiness to learn reading, writing, Math, through guided play.
5. Considering children's desire to learn and meeting their needs to explore and discover.
6. Providing children with some religious, scientific and social concepts suiting their intellectual development stage.
7. Helping children to achieve a normal emotional growth that leads to self-respect and acceptance.
8. Developing children's artistic and aesthetic appreciation and developing the skills of expressing this through movement and acting.
9. Developing the spirit of initiation, group work, voluntary work and innovation
10. Achieving an integrated physical development which enables children to follow the adequate healthy habits while washing, eating, playing and working.
11. Developing children's senses and abilities to observe nature and local environment and learning to protect its components.
12. Providing children with positive social skills that guide their behaviour and interaction with their peers and make them consider group work and respect the values of family and society.
13. Preparing children to join formal education environment and to respect school rules and regulations.

(Ministry of Education, The developed Educational Objectives in the State of Qatar, November, 1994).

Appendix 4 (The Main Objectives of the Pre-School)

1-Religious education:

Children should be able

1. To recognize the oneness of God by observing and discussing what God creates such as humans, animals, plants and other objects.
2. To mention some of God gifts to people.
3. To naming God in different situation
4. To listen to the Holy Verses with respect and reverence.
5. To maintain God's Book in a good condition.
6. To memorize some verses from the Koran
7. To explain some of the prophet's characteristics.
8. To tell some of the prophets' stories
9. To recognize the mosque as a place of worship.
10. To keep calm in the mosque.
11. To perform some religion duties such as washing before prayer, praying and fasting
12. To practise some customs and traditions that are performed during the religious feasts.
13. To respect their parents and obey them
14. To follow the Islamic values and teachings while listening, speaking, treating the poor and sympathizing with others.

2- The Language Experiences:

1. To expand his linguistic skills according to his abilities
2. To practise some language skills such as asking, affirmation and negation
3. To repeat the words following a model.
4. To distinguish between the sounds of the letters and to pronounce them clearly and correctly.
5. To use sentences consisting of six and seven words correctly.
6. To name things using their accurate names.
7. To describe the characteristics of objects in the environment surrounding him.
8. To talk about his experience and the experience of others fluently using words and sentences correctly.
9. To express his feelings, emotions, thoughts and imagination.
10. To form links between pictures and their linguistic equivalents.
11. To use language in social situations.
12. To enjoy the language of rhymes and stories.
13. To organize his ideas while talking and to describe a series of events in their correct sequence
14. To learn the skill of useful listening.
15. To describe the relation between objects and their characteristics.
16. To develop some pre-reading skills such as visual recognition of differences and similarities between shapes, colours, words and sizes.
17. To develop some pre-writing skills such as recognition of directions, drawing vertical and horizontal lines...etc.
18. To read some words and simple sentences.
19. To write some letters and words

3- Mathematical concepts:

Matching and Sorting

1. To match things that go together according to specific features.
2. To classify things in groups according to specific feature (colour, shape, size, similarity, difference, sex....etc)
3. To sort things according to their relation (function, place, time, ..etc.)
4. To compare and contrast between groups (more/ less/ bigger / smaller/ equal ..etc.)

Ordering and Sequencing

1- To reorder objects according to their size and length.
2- To recognize ordinal numbers (first, second, third, ...tenth.)

Numbers

1. To count from one to ten and beyond according to the child's level
2. To read the numbers from 1-10
3. To show understanding of the concept of numbers from 1-10 by using them correctly
4. To write the numbers correctly
5. To practise unifying two groups and name the elements of the new group.
6. To practise subtracting a group from another and naming the group left.

Recognizing shapes and sizes

1. To name some shapes (square, triangle, circle, rectangle, oval..)
2. To use shapes in his expressive language.
3. To compare between different sizes and shapes

Measurements and Weights

1. To compare between weights of objects (heavy-light-heavier-lighter....)
2. To compare between sizes of different objects
3. To find the relation between objects'shapes, weights, quantities and sizes
4. To name some weight units and compare between them

Money

1. To name some units of currency
2. To use money for buying appropriately
3. To compare between units of currency-notes and coins (bigger, smaller...)
4. To recognize the currencies of some neighbouring countries

Time relations

1. To tell the time (morning, afternoon, a.m, p.m....)
2. To use the concept of time appropriately
3. To relate time to daily activities
4. To name the days of the week
5. To use the concept of time in full sentences

Spatial relations

1. To identify the location of objects (in-out-up-down-front-back-up-down-near-far)

2. To compare between locations of objects (higher, lower, nearest, farthest....)
3. To describe directions of moving objects (right-left-east-west-north-south)
4. To describe the distance relations in drawings, cartoons and shapes

Cause/ effect relations

1. To find the cause/ effect relations between objects
2. To conclude the relations and test the effects of some processes on objects

4- Basic scientific concepts

1. To practise some activities that explain some basic scientific concepts (evolution, growth, reproduction...)
2. To name the features of particular objects (hard-soft-fragile.....)
3. To identify the three states of matter (solid, liquid, gas)
4. To find the characterizing differences between some objects (colour, touch, smell, taste, heat, dissolution.....)
5. To find the similar features between some objects
6. To understand some scientific concepts (porosity, floatation, dispersion, floatation, electricity, magnetism..)
7. To use some scientific expressions to describe the weather (sunny-cloudy-wet-windy-cold-hot-warm.....)
8. To name the characteristics of the seasons of the year and goods of each
9. To some of the plants in his environment
10. To name the main parts of the plant
11. To compare between plants according to their shape, colour and usefulness
12. To classify plants according to certain properties (vegetable-fruits-shape-colour.....)
13. To describe the basic conditions required for plants to grow
14. To name some animals
15. To explain the usefulness of some animals to human beings
16. To make a comparison between some wild and domestic animals (colours-shapes-their living habitats-growth-reproduction.....)
17. To classify animals according to certain features (colour-size-group : birds-ants-animals-fish-.....)

5. Health and Safety

1. To name the properties of some food items and their usefulness to human beings
2. To choose a balanced diet that suits his development.
3. To acquire the habit of eating fruit, vegetables and milk instead of sweets, carbohydrates and beverages
4. To practise hygienic habits before and during the meals
5. To keep his food clean from dust-insects-flies-ants.....
6. To practise some good hygiene (washing hands-mouth-teeth-hair-nails-body-clothes.....)
7. To name the causes of environment pollution
8. To protect the environment and surroundings from pollution
9. To stay a way from the sources of danger in the house and in the environment (medicine- fire-electric cables- weapons- putting things in the mouth- street dangers)
10. To appreciate visiting the doctor when necessary

11. To follow the doctor's and nurse's directions in health and in illness
12. To know about the health in his environment (pharmacy-clinic-hospital)

6-Personal, social and emotional development

Personal development

1. To show interest in exploring the components of his environment through touching, observing and questioning
2. To show an interest in producing a piece of work during activities
3. To get involved in playing positively
4. To point out what he can do in a positive way
5. To get involved in games individually and with a group depending on his age
6. To be self-reliant in doing his daily routine (putting his clothes on, washing his hands before and after eating)
7. To be able to decide what he can do and choose the activities suitable for him
8. To show interest in others (old and young)
9. To express his emotions in a way suitable for his age
10. To develop the ability to express verbally his emotions and use language as a means to control his behaviour
11. To show his ability to control his aggressive emotions
12. To follow the rules and regulations made by others

Social Relation

1. To listen to the teacher's instructions willingly
2. To respond positively to social reinforcement from adults
3. To keep good relations with adults
4. To imitate positive behaviour patterns of his parents or his peers .....
5. To recognize the roles in real life through practising role play
6. To show interest in what is presented or explained to him
7. To make mutual cooperative relations with others
8. To solve his own problems and those with peers positively
9. To act freely – within limits- in different situations
10. To obey regulations (wait for his turn, excuse, respect traffic rules)
11. To behave in a socially accepted manner considering being male or female
12. To classify according to certain criteria
13. To describe people's emotions in stories, pictures and caricatures....
14. To describe others' feelings through observing face expressions, voice tone, tenor..
15. To explain others' feelings in different situations
16. To be aware of the different roles in the family, workplace.....
17. To respect the rights of others and distinguish between his rights and duties
18. To know about social differences in different cultures in customs, traditions, living, transport.....
19. To respect feelings and traditions of people from other nationalities
20. To participate cooperatively in religious and national ceremonies and festivals

7-Artistic education

1. To learn about the raw materials and instruments used in a work of art and the function of each
2. To use different instruments and materials in his artistic expression
3. To recognize the properties of each material and its use in the artistic work
4. To acquire positive skills and habits in using instruments, and raw materials

5. To control his hand muscles and develop hand-eye coordination
6. To show self-control through completing the work of art he started
7. To express his feelings and fears in art
8. To express his thoughts and interests through different works of art
9. To express his environment and the world surrounding him in art
10. To listen to other people's artistic expression which would improve his understanding of them

8- Music and Song

1. To improve the child's vocabulary and syntax
2. To express his thoughts through songs and rhymes
3. To enjoy songs and rhythmic movement
4. To express his feelings through music, songs, and rhythmic movement
5. To listen to soft musical patterns and show pleasure
6. To describe musical sounds (fast, slow, sharp, high, slow, happy, sad, ...)
7. To explore different musical instruments and distinguish between their sounds
8. To develop control of his muscles and his body movement
9. To obey instructions and show self control while practising rhythmic movement

9- Physical development and perception

The Senses

1. To recognize the function of each of the five senses
2. To recognize the smell of different objects and compare between them
3. To recognize the taste of different objects and compare between them
4. To use senses to distinguish between objects
5. To describe how different objects feel and compare between them.
6. To describe the sounds of objects and distinguish between them
7. To compare colours, shapes and sizes of objects and living things

Developing large muscles

1. To practise different activities require balancing and general control of the body
2. To gain the skill of throwing and catching (a ball...)
3. To gain the skill of balance and coordination while walking in different manners (long footstep, short footstep, tip toe, on a wooden bench, on a straight line, curve, ...
4. To control his muscles while walking
5. To gain the skill of balancing while going up and down (stairs, sloping surfaces, hills..)
6. To balance while standing on one foot
7. To control his muscles while jumping and hopping in different situations
8. To control arm muscles while carrying and lifting things
9. To show control of trunk muscles in different situations
10. To express some ideas through hand, foot and arm creative movement
11. To respond to certain sounds using certain coordinated physical movements

Developing small muscles

1. To show eye-hand coordination while doing certain activities (folding paper, cutting, tying shoe lace, making a necklace

2. To show skill in using small equipment such as scissors, cutlery and measurements
3. To control his hand muscles while writing, drawing and other art activities
4. To show eye-hand coordination while assembling and puzzle games.

(Ministry of Education, Preschool Curriculums ,(1988), pp.5-14)

Appendix 5 (The behavioural Objectives)

1- The People Experience (Stage One and Two)

The Behavioural Objectives:

1- To say that Almighty God is the creator of human beings and all other living things
2- To cite prayers and the prophet's traditions in appropriate situations
3- To perform some worships
4- To recognize that each person has a name distinguishing him from others
5- To recognize the parts of the human body
6- To name some functions of the human body
7- To explain ways to take care of the body
8- To compare between his own personal features and those of others
9- To recognize the different age stages
10- To recognize people
11- To name the five senses
12- To name the functions of the five senses
13- To thank God for the gift of the five senses
14- To compare between people in different growing stages
15- To mention the importance of food
16- To say the appropriate prayers when starting to eat
17- To name the components of the main meals
18- To name the sources of food in the environment
19- To recognize the utensils of the dinning table
20- To recognize the how food changes to other forms
21- To practise hygienic habits related to food
22- To keep his food clean
23- To recognize prevention measures from illness and accidents
24- To get used to eating a balanced diet
25- To express feelings of happiness, sadness and anger
26- To relate feelings to their causes
27- To respect the rules and regulations in his personal behavior
28- To distinguish between what is right or wrong in his personal behavior
29- To politely express his feelings and the feelings of others
30- To know his gender
31- To distinguish between boys and girls names
32- To list the names of his family members
33- To mention the role of each family member
34- To name the titles of blood relatives
35- To appeciate the importance of the home
36- To name the different rooms in the house and their equipment
37- To comparing houses in different environments
38- To mention some daily routines
39- To name some professions and jobs
40- To appreciate the importance of different professions in the society
41- To name the equipment and clothes required for each job

42- To Describing how people move from one place to another
43- To Gives a reason why people move from one place to another
44- To name means of communication people use
45- To recognize some means of communication and how to use them
46- To name some national, religion and Social occasions that make people come together
47- To practise some traditional dances
48- To celebrate national, religion and Social occasions in his environment
49- To name some traditions of his country
50- To respect the rules and regulation in his personal behavior (R)
51- To respect the traditions of his country
52- To name the traditional clothes of his country
53- To name old weapons used in his country
54- To visit some historical sights
55- To mention the importance of pre-school and its advantages
56- To name some places of interest in his country
57- To name some learning activities done at school
58- To list the four seasons of the year
59- To list the days of the week
60- To identify means to keep the environment clean
61- To appreciate keeping the environment non polluted
62- To learn how to respect all God creatures
63- To Learn to respect other people's rights and privileges
64- To acquire the skill of protecting the environment
65- To mention the importance of sounds in people's life
66- To list the different sounds around us
67- To imitate some sounds
68- To identify some sounds that pollute the environment
69- To contribute in solving the problem of noise

2- Water Experience (Part One and Two)

1- To identify water resources in the environment
2- To conclude the importance of water for human life
3- To conclude the importance of water for animal life
4- To conclude the importance of water for the plants life
5- To recite some holy verses and prophet's traditions related to water
6- To describe the three states of water (Freezing, Liquid, Steam)
7- To mention the factors that cause freezing
8- To mention the factors that cause water pollution
9- To mention the materials that dissolve in water
10- To mention the materials that do not dissolve in water
11- To name the jobs related to water
12- To Name some of sea living species
13- To list the uses of water
14- To list dangers caused by water
15- To Name some objects that or sink in water
16- To mention the importance of building dams on rivers
17- To practise watering the plants
18- To have interest in watering the animals and birds in the school
19- To explain the importance of water for humans and all living things

20- To conclude that water evaporates by heating
21- To practise hygienic habits
22- To practise the habit of saving water and using it carefully
23- To discover aspects of waste in using water
24- To avoid using dirty water
25- To protect water resources in the environment from pollution
26- To protect water resources from being wasted
27- To practise etiquette of using water
28- To show happiness while playing with water
29- To show appreciation of water through using it
30- To state that seas and oceans are the resources of rain
31- To distinguish between fresh water and salty water
32- To explain why people go to the sea in summer
33- To explain the existence of water in different states
34- To state the importance of water to living things
35- To identify the water role in preparing the food
36- To relate water resources to building new towns and villages
37- To relate the rain insufficiency to starvation
38- To practise water games and sports
39- To memorize some songs related to water
40- To make visits and trips to some water resources

3- The Plant Experience

After studying the plant experience, the child will be able:

1. To name some of the different plants in the environment
2. To investigate that the plant is a living thing
3. To identify the plants basic needs (water-air- light- food)
4. To name some of the plants advantages
5. To name some of the plants that are mentioned in the Holy Koran
6. To measure the plant height in a simple way
7. To memorize (Al-Teen) Sura (A chapter in the Holy Koran named "the fig")
8. To compare the average growth of different plants
9. To observe sand plants and water plants
10. To naming the main parts of a plant (trunk-stalk-leaves-flowers-seeds)
11. To plant or help in planting in a bed
12. To plant his own plants
13. To Classify a group of plants in a simple way such as :
    - plants that parts of them can be eaten(roots-stalk-leaves-flowers-seeds)
    - season plants and evergreen plants
    - food plants and decorative plants
    - edible and non-edible plants
    - plants that produce seeds-woods-vegetables- fruits....etc
    - plants that are harmful for other plants that are poisonous for human beings and animals.
    - medicinal plants
14. To Prove by experience that some plants reproduce by seeds or other ways
15. To appreciate then aesthetic value of plants in his environment
16. To take care of plants

17. To Distinguish between flowers, their fragrance and their names in his environment
18. To appreciate the state's efforts to create green landscapes in towns and districts and protect them
19. To state that the fruits of some plants have one seed and others have more
20. To show awareness that plants are God's gift for humans and animals providing food, shade, cloth ....etc through the appropriate use of them
21. To visit a flower shop
22. To arrange flowers making a bouquet
23. To name some seasonally celebrated plants (box-thorn, Christ-thorn ...etc)
24. To memorize a song about plants
25. To identify the farmer's job and his equipment
26. To name some plants in the Qatari environment
27. To list positive practises towards the plants in the environment
28. To Identifying the environmental problems and how to face them
29. To name the different types of sand
30. To mention the steps of planting
31. To mention the components of fertile soil
32. To prove by experience that some plants need air
33. To visit a garden, a farm and a vegetable market
34. To describes the job of the greengrocer and his equipment
35. To participate in preparing a dish of vegetables, fruit, or cereals

4- Animals Experience (first stage and second stage)

The child at the end of the Animal Experience will be able:

1. To name different animals (wild, tamed, birds, insects, fish...) with focus on local animals
2. To identify the characterizing features of some animals
3. To appreciate God's greatness through observing the enormous animal riches
4. To describe some animals regarding skin, appearance, sound, number of legs and wings.
5. To identify the need of animals and birds for water, food, sunlight, home and care.
6. To compare between animals regarding breading, food, habits, weight and colour
7. To identify some distinct animals
8. To name some food items that animals eat and their resources.
9. To compare between animals and their young regarding their names, appearance, sound and food.
10. To imitate some animals' sounds and movement.
11. To identify some different environments that animals live in.
12. To identify the relationship between humans and animals and how each depends on the other.
13. To name the benefits that humans receive from animals
14. To name the local fishes
15. To take care of domestic animals and protect them
16. To approach animals by helping, carrying and feeding them...etc
17. To clean his place and protect it from insects
18. To memorize (Al-Feel) Sura (A chapter in the Holy Koran named "the elephant")

19. To name some animals mentioned in the Holy Quran
20. To name some animals that live in Qatar
21. To take part in a play about animals and birds.
22. To follow health and safety rules when dealing with animals
23. To listen to stories and some of the prophet's traditions concerning animals
24. To tell the names of some birds' and animals' nests
25. To memorize a song about animals
26. To visit a zoo, a cow farm or a pet shop.
27. To prepare a meal using animals' product with the teacher's assistance
28. Using animals' products to produce a work of art

5- The Transportation Experience

The child after learning the transportation experiences will be able:

1. To distinguish between the different types of transport (land, sea and air)
2. To classify different means of transportation to their type (land, sea, and air)
3. To use raw materials in his environment to make models of some means of transport
4. To classify means of transport according to their speed
5. To show that means of transport have different sizes and shapes
6. To identify the different uses of transportation
7. To identify the different sounds that the different means of transportation produce
8. To identify the major components of common transportation?
9. To classify means of transport to fast and slow
10. To distinguish between old and modern transportation
11. To talk about the means of transport he uses to and from school
12. To relate means of transport to the paths they follow
13. To listen to the story of Noah's Ark
14. To follow appropriate etiquette when dealing with people related to transportation (passengers, drivers, policemen, pedestrians...etc)
15. To use the seat belt in a car
16. To thank God for all his blessings including transportation
17. To identify some uniforms related to transportation (pilot, hostess, ship captain, steward...etc)
18. To take part in making signs and paintings about transportation
19. To list some jobs related to transportation
20. To take part in sustaining the means of transport
21. To obey traffic rules
22. To practise physically following the traffic rules
23. To collect pictures and models of transportation from files and newspapers
24. To practise playing the role of a bus driver, car driver pilot...etc
25. To make a trip with the teacher using a means of transport
26. To mention the sound and noises that come from the means of transport
27. To imitate the sounds of some means of transport
28. To memorize the prayers said when using a means of transport
29. To memorize a song about a means of transport
30. To make a visit to a seaport, airport or a car showroom.

(Ministry of Education, Document of Learning Experiences Curriculum, pp.37-67)

Appendix 6 Teacher's Questionnaire

Mathematical Development **Does the curriculum achieve the objective of helping the children:**		**Yes**	**No**
1.	Making comparison of quantity		
2.	Making reasonable estimate of small quantity		
3.	Counting to find one more fewer		
4.	Developing mental strategies for addition and subtraction		
5.	Using large number up to 10 in contexts		
6.	Using large number in context: 10p 20p 5p pound		
7.	Creating a pattern from shapes		
8.	Making an increasing/decreasing pattern		
9.	Sorting, matching and comparing		
10.	Using comparative language of length		
11.	Using comparative language of weight		
12.	Using comparative language of capacity		
13.	Sequencing events		
14.	Experiencing different rates of speed		
15.	Comparing different units of time		
16.	Sorting into sets		
17.	Rearranging and reshaping dough		
18.	Describing simple properties of 3D shapes		
19.	Describing simple properties of 2D shapes		
20.	Exploring reflection and symmetry		
21.	Recording information to make a comparison and prediction: Weather		
22.	Discussing the properties of a solid and flat shape		
23.	Using every day words to describe position		
24.	Recognizing the name of the month of the year		
25.	Finding one more or one less than a number from 1 to 10		
26.	Using the following terms: Straight line, open curve, close curve		
27.	Using the terms, more, less and equal		
28.	Learning to count from 1 to 20		
29.	Using the calendar daily		
30.	Naming in order the days of the week		
31.	Telling the time (morning, afternoon, evening)		
32.	Using words such as 'more' or 'less' to compare two numbers		
33.	Using language such as 'greater', 'heavier', and lighter to compare quantities		
34.	Using developed mathematical ideas and methods to solve practical problems		
35.	Using shapes appropriately for tasks		

Knowledge and Understanding of the world **Does the curriculum achieve the objective of helping the children:**		**Yes**	**No**
1.	Being aware of the needs of babies and how they change when they grow		
2.	Developing awareness of each persons individually		
3.	Understanding that people grow older		
4.	Understanding that families consist of different types of people		
5.	Understanding the sequence of months and its related to birthdays		
6.	Understanding how we learn to talk		
7.	Learning how people change as they grow up		
8.	Naming parts of the body		
9.	Recognizing that living things live in a variety of habits		
10.	Understanding that living things need certain conditions in which to thrive		
11.	Observing change in growing plants		
12.	Recording the changes in the growing blub		
13.	Finding about the features of the local environment		
14.	Learning about the health centre		
15.	Investigating bubble mixture and bubble shapes		
16.	Observing the similarities and differences between bodies and their shadows		
17.	Using technology for an appropriate purpose		
18.	Knowing about own cultures and beliefs and those of other people		
19.	Finding out about past and present events		
20.	Recognizing people's needs in their environments		
21.	Identifying some features of living things		
22.	Investigating what happens in the rain		
23.	Identifying uses of every day technology		
24.	Building and constructing with wide range of objects		
25.	Describing what we see when we look up		
26.	Understanding how things move		
27.	Investigating the movement in wheeled objects		
28.	Observing what happens when you whisk different mixture		
29.	Sorting toys to a variety of criteria		
30.	Developing the skills of designing and making		
31.	Knowing his five senses		
32.	Looking at similarities, differences, patterns and change		
33.	Investigating objects and materials by using the appropriate senses		
34.	Selecting tools and techniques to shape and assemble materials		
35.	Encourage children to ask questions about why things happened and how things work		

	Creative Development **Does the curriculum achieve the objective of helping the children:**	**Yes**	**No**
1.	Developing awareness of soft, loud and graduate sounds		
2.	Understanding when to stop and when to start		
3.	Developing voice control		
4.	Developing the awareness of rhyme and musical patterns		
5.	Appreciating a variety of musical styles		
6.	Appreciating the work of well known composers		
7.	Developing the awareness of the way sounds are made		
8.	Learning to discriminate between sounds		
9.	Exploring a range of instruments		
10.	Practising musical skills		
11.	Developing awareness of the sounds made by different notes		
12.	Developing awareness of shapes and pattern		
13.	Exploring the textures and colours of a variety seeds and pulses		
14.	Developing appreciation of art		
15.	Learning about different Artists' style		
16.	Developing awareness of texture and design		
17.	Understanding how materials can be joined and hardened		
18.	Exploring ideas and feelings through using puppets		
19.	Developing imagination through stories and imaginative play		
20.	Exploring ideas by acting out a familiar journey		
21.	Developing awareness of seasonal changes through dance		
22.	Exploring the way that animals move and behave through dance		
23.	Developing emotional and creative response through music and movement		
24.	Developing imagination and ability to role play in a situation		
25.	Learning about the fire service through imagination play		
26.	Learning about role play travel agents and learning about other countries		
27.	Learning about hair dressing through imagination play		
28.	Learning about working in an office through role play		
29.	Learning about planting and growing seeds and plants		
30.	Designing and making resources for use in imaginative play		
31.	Developing imagination by using cloths and props		
32.	Using every day objects imaginatively		
33.	Developing enjoyment of circle dances		
34.	Responding in a variety of ways to what they hear, smell, touch & feel		
35.	Gaining experiences of dance patterns and working with partners		

Communication Language and Literacy **Does the curriculum achieve the objective of helping the children:**		**Yes**	**No**
1.	Making up their own poems using a list of words they learned		
2.	Taking turns in conversations in interacting with others		
3.	Using their phonic knowledge to write simple and regular words		
4.	Exploring and experimenting with word endings		
5.	Listening to rhymes and making up their own accordingly		
6.	Using languages to imagine and recreate roles and experiences		
7.	Writing labels and captions		
8.	Becoming to form simple sentences		
9.	Retelling a narrative in the correct sequence		
10.	Understanding how information can be found in non-fiction texts		
11.	Reading a range of familiar and common words independently		
12.	Linking sounds to letters		
13.	Showing an understanding of the elements of stories		
14.	Naming and sounding the letters of the alphabet		
15.	Understanding the main character of the story		
16.	Hearing and saying initial and final sounds in words		
17.	Writing a letter using features of letter writing		
18.	Shared reading of a big book non-fiction		
19.	Writing their own names		
20.	Using full stop at the end of the sentence		
21.	Sustaining attentive listening and responding to what they have heard		
22.	Holding a pencil to form recognisable letters		
23.	Speaking clearly with confidence		
24.	Showing awareness of the listener		
25.	Describing main characters in a story		
26.	Reading on sight the words of appropriate difficulty		
27.	Reading on sight captions		
28.	Reading on sight labels		
29.	Developing expressive language		
30.	Writing a book using specified vocabulary		
31.	Predict what might happen next in a story		
32.	Discussing the differences between fiction and not fiction book		
33.	Discussing the sequence of time, encouraging whole-class participation.		
34.	Understanding that English read from left to right and top to bottom		
35.	Retelling events from non-fiction story		

Personal, social and emotional development **Does the curriculum achieve the objective of helping the children:**		**Yes**	**No**
1.	Becoming aware of the group activities.		
2.	Talking about what makes each of us unique.		
3.	Learning appropriate ways of handling disagreement.		
4.	Coping with changes in routines.		
5.	Developing sense of belongingness in a group.		
6.	Feeling proud of personal achievement.		
7.	Making critical choices.		
8.	Feeling confident in leading a whole group activities.		
9.	Learning to watch and imitate others.		
10.	Speaking in front of a group.		
11.	Learning to be still and quiet.		
12.	Learning how to look and listen to group instructions.		
13.	Developing concentration and memory.		
14.	Being able to listen out for key information during a group story.		
15.	Becoming independent when putting on a coat.		
16.	Developing independently when using cutlery.		
17.	Indicating clear choices when planning craft work.		
18.	Managing independently in the toilet.		
19.	Practising saying 'please' and 'thank you'.		
20.	Taking turns with a small group of children.		
21.	Practising helping people.		
22.	Thinking about different ways of sharing with each other.		
23.	Playing co-operatively with a partner.		
24.	Using colours to illustrate feelings.		
25.	Talking about friends and how to be friendly.		
26.	Using movement and dance to express feelings.		
27.	Developing self-esteem.		
28.	Considering the feelings and wishes of other children.		
29.	Learning how to give and take.		
30.	Trying new activities, initiate ideas and speak in front of a group.		
31.	Being interested, exited and motivated to learn.		
32.	Recognizing their own needs, feelings and views.		
33.	Forming good relationship with adults and peers and feel part of a group.		
34.	Understanding what is right and wrong,		
35.	Respecting the ideas and opinion of others.		

Physical Development **Does the curriculum achieve the objective of helping the children:**		**Yes**	**No**
1.	Moving with confidence and imagination to an action song		
2.	Manipulating small objects with control		
3.	Handling tools, objects and equipment with increasing control		
4.	Handling instruments with confidence		
5.	Using balancing and climbing equipment		
6.	Moving and using space with confidence		
7.	Raising health awareness of the dangers of too much sun		
8.	Showing awareness of hygiene		
9.	Recognizing that changes happen to their bodies when they are active		
10.	Using tools and wood safely and with increasing control		
11.	Using tools and small equipment with confidence		
12.	Moving under, around and through equipment		
13.	Moving in a team and use space with confidence		
14.	Using malleable materials with safety and control		
15.	Developing cutting and sticking skills		
16.	Moving confidently through hoops		
17.	Coping a pattern of movement		
18.	Showing awareness of space, of themselves and others		
19.	Carrying a cup filled with water from one place to the other located 3 meter away without spilling.		
20.	Walking around a four circle without stepping off the line		
21.	Handling bats and balls with increasing control		
22.	Developing hand-eye-coordination		
23.	Aiming at a target		
24.	Handling construction toys with increasing control		
25.	Building towers and bricks		
26.	Threading beads in a pattern of colours		
27.	Balancing on a bench and jump onto a mat		
28.	Exploring the concept of being upside down		
29.	Developing balance using skipping rope		
30.	Assembling and baking tart		
31.	Using plasticine to produce three dimensional picture		
32.	Walk heel-to-toe for four or more steps along a line		
33.	Standing on one foot for five seconds		
34.	Hop on one foot for ten seconds		
35.	Recognizing the importance of being healthy		

The Environment **Are the following facilities and equipment available or not?**		**Yes**	**No**
1.	A 10 metre square of usable playroom floor space per child		
2.	A 25 metre square play space outdoors per child		
3.	Arranging space to facilitate small or large activities		
4.	The activity area including block building		
5.	Sociodramatic play area		
6.	Art area		
7.	Music area		
8.	Science area		
9.	Math area		
10.	Manipulative games area		
11.	Quiet book, reading and writing area		
12.	Sand and water area		
13.	Woodworking area		
14.	Carpet area		
15.	Individual space for children to store their belongings		
16.	Low open shelves		
17.	Indoor private area		
18.	Outdoor private area		
19.	Soft elements in the environment such as rugs, cushions, rocking chairs		
20.	Outdoor flat sections		
21.	Outdoor sand		
22.	Outdoor grass		
23.	Outdoor hard areas for wheel toys		
24.	Outdoor shaded area		
25.	Outdoor open area		
26.	Outdoor digging space		
27.	Variety of digging equipment		
28.	Variety of riding equipment		
29.	Outdoor climbing equipment		
30.	Balancing equipment		
31.	Outdoor area surrounded by fences		
32.	A senior staff is in charge of a full day programme		
33.	Renewal the licenses of the pre-school yearly		
34.	A pre-school person for all time knows First Aid Kit		
35.	In a field trip a person who knows CPR and First Aid Kit		

Appendix 7 (Teacher's Interview Questions)

1.	Date of Interview:
2.	Name of School:
3.	School Location:
4.	Year School was established:
5.	Curriculum used:
6.	Number of Students:
7.	Age range of Students:
8.	Sex: Ratio:
9.	Schedule of the Classroom: (attach it)
10.	Name of the Teacher:
11.	Nationality:
12.	Sex:
13.	Job Title:
14.	Qualifications:
15.	Work Experience:
16.	Work Experience in the teaching field:
17.	Working hours per day:
18.	Number of assistants
19.	Duties

	The curriculum you use…..	Yes	No
1	Does it reflect current and emerging views of early childhood education?		
2	Does it promote interactive learning and encourage the child's construction of knowledge?		
3	Does it help achieve social, emotional, physical, and cognitive goals?		
4	Does it encourage development of positive feelings and dispositions toward learning while leading to acquisition of knowledge and skills?		
5	Is it meaningful and relevant to the children's lives?		
6	Are the curriculum expectations realistic and attainable at this age?		
7	Is it of interest to the children and to the teacher?		
8	Is it sensitive to and respectful of cultural and linguistic diversity?		
9	Is the information presented accurate and credible according to the recognized standards of the relevant discipline?		
10	Is this content worth knowing? Can it be learned by these children efficiently and effectively now?		
11	Do you have enough time to cover the curriculum?		
12	Does it foster children's exploration and inquiry, rather than focusing on "right" answers or "right" ways to complete a task?		

Appendix 8 (Mother's Questionnaire)

School Name: .....
Child'd Name:.....
Mother's Name:.....
Mother's Age:.....
Mother's Job:.....
Mother's Qualifications:.....

To what extent should the curriculum goals focus on the following:	**Strongly agree**	**agree**	**undecided**	**disagree**	**Strongly disagree**
1. Develop children's artistic and aesthetic appreciation					
2. Enhance the child's independence and self confidence					
3. Stimulate creativity and intellectual exploration					
4. Socialize and interact with peers					
5. Develop academic skills in reading, writing and math					
6. Enhancing love of homeland and belonging to the Arab Islamic nation					
7. Prepare children to join formal education environment					
8. Develop religious and moral values					
9. Help children achieve a normal emotional growth that leads to self-respect and acceptance					
10. Achieve an integrated physical development					
To what extent should the curriculum content focus on the following?	**Strongly agree**	**agree**	**undecided**	**disagree**	**Strongly disagree**
1. Memorizing Quran					
2. Memorizing the alphabet					
3. Learning to count numbers in sequence					
4. Learning through activities related to the child's interests					
5. Playing freely					
6. Colouring and cutting ready-made forms					
7. Integration of subjects					
8. Providing activities developing large and small muscles					
9. Singing and listening to music					
10. Classifying and grouping objects					

To what extent do you agree on using the following teaching strategies?	**Strongly agree**	**agree**	**undecided**	**disagree**	**Strongly disagree**
1. Teaching all children the same thing at the same time					
2. Giving children the freedom to choose their activities					

3. Teaching children to sit quietly, listen to and obey their teachers					
4. teaching children of different ages and abilities in the same setting					
5. Using learning centres and corners for different activities					
6. Using textbooks and teachers as main sources of knowledge					
7.Giving a lot of time for children to play with their age mates					
8. Encouraging group work					
9. Encouraging memorizing information					
10. Encouraging learning by doing					
To what extent do you agree on the following teacher's roles?	**Strongly agree**	**agree**	**undecided**	**disagree**	**Strongly disagree**
1. Providing an interesting and rich environment that offers children choices					
2. Encouraging competition among children					
3. Preparing different levels of activities for children of different abilities and interest					
4. Preparing a child-initiated environment					
5. Instruction by giving information					
6. Interfering and correcting any mistakes directly					
7. Observing each child's behaviour to learn about him					
8. Preparing a teacher-initiated environment					
9. Working closely with parents to help their children					
10. Emphasising one right answer to each question					

Appendix 9

A Model Daily Schedule of an English Speaking School

Time	Activities
8:00	Welcoming children.
8:20	Children are divided into four groups. Group 1 (Math): Four children sitting with an assistance on a table using plastic fruits and a sheet of paper, adding 3+2=5, drawing the shape of the fruit on the number. Group 2 (Reading): Three children with a teacher reading a big Kipper balloon book. Every child has his own book reading together. Group 3 (Comprehension): Children join up letters with pictures, words with pictures, sentences with pictures. Group 4 : Playing outside with the sand.
9:15	Children count 1-12 ; adding 2 fingers+3fingers=5, etc
9:30	Break outside
9:45	Snack in the classroom
10:00	Music
11:00	Gathering the whole class to read them a story about snails and mini bees
12:00	Corners: Math activity, English activity, Reading activity

Appendix 10
A Model Daily Schedule of an Arabic Speaking School

Time	Activities
6:45 to 7:00	The teachers prepare the classroom for children and wait for them to come individually. They are allowed to move freely in the corners. Then they are directed to move their names from the absent sheet.
7:00 to 8:00	Children gather around their teacher. Qs &As about the days of the week, yesterday, today, tomorrow and matching words to picture related to the weather: raining, warm, sunny, cold, windy, cloudy, hot, mild. The religious experiences: Children recite some short verses of the Holy Quran. Then recite traditional Islamic prayers of rising, sleeping, travelling etc.
8:00 to 9.00	Working with handouts related to the experiences in group of three. The experience today is the animals' experience. The objective is to identify number-1-2-3-4-5-6-7-8-9. The teacher gives children a picture of two bees to colour and write the number in a small box. Children cut names of some zoo animals and stick them under the picture e.g. giraffe, zebra, lion, tiger, oyster, elephant, monkey, dear
9:00 to 9:30	Children put everything in it's place, wash their hands and eat their snack inside the classroom under the teacher's supervision
9.30 t0 10.00	The children go out and play outside. Different activities most of them movement and races
10.00 to10:30	The students gather again a round the teacher. She reads a story related to the experience "The elephant and the three rabbits". Children are sitting on the carpet and listening. When the teacher finishes reading the story, several children repeat the story in his or her own words.
10:.30 to11:00	Children do art work such drawing, shaping, hand work using different materials
11.00 to11:30	Free play in the corners where children play freely and chat with their peers
11.30 to12:00	Children gather again, talk about their feeling and recite some rhymes.
12:00	Ready to leave